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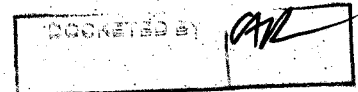
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Transcript Exhibit(s)

Docket #(s): E-01345 A-06 0009

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Exhibit #: APS 1, APS 2, APS 3, APS 4, APS 5,

APS 6, APS 7, APS 8, APS 9, APS 10,

APS 11, APS 12, APS 13, APS 14, APS 15,  
APS 16, APS 17, APS 18, APS 19, APS 20,  
APS 21, APS 22, APS 23, APS 24, APS 24  
APS 25



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**ORIGINAL**

To: Docket Control

Re: APS / Interim Rates E-01345A-06-0009  
03-20-2006 through 03-29-2006

Date: March 30, 2006

### ERRATA TO EXHIBITS

<p><b>Description and /or page number reference missing from index page</b></p>
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STAFF EXHIBITS	Identified	Admitted
S-5 Direct Testimony of Barbara Keene	2150	2152
S-6 Errata Filing re Testimony Of Barbara Keene	2151	2152
S-7 Staff Response to Request of Com. Mayes	1774	2157
S-8 Staff's Response to March 23, 2006, letter from Chmn. Hatch-Miller	1774	2157



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#### APS

1 through 25

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1 through 10

#### RUCO

1 through 8

#### AECC

1 through 7  
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APS / Interim Rates

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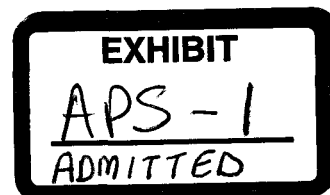
Volumes I through VIII

APS  
EXHIBITS  
*1 through 25*

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**REBUTTAL TESTIMONY OF STEVEN M. WHEELER**  
**On Behalf of Arizona Public Service Company**  
**Docket No. E-01345A-06-0009**

**March 13, 2006**



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1                   **REBUTTAL TESTIMONY OF STEVEN M. WHEELER**  
2                   **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**  
3                   **(Docket No. E-01345A-06-0009)**

4    I.    INTRODUCTION

5    **Q.    PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

6    A.    My name is Steven M. Wheeler. I am Executive Vice President, Customer  
7           Service and Regulation for Arizona Public Service Company ("APS" or  
8           "Company"). In that role, I am responsible for the planning, construction,  
9           maintenance and operation of the APS transmission and distribution systems. I  
10          am also responsible for customer service, rate, and regulatory matters affecting  
11          the Company before the Arizona Corporation Commission ("Commission") and  
12          the Federal Energy Regulatory Commission ("FERC")

13   **Q.    WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL**  
14   **BACKGROUND?**

15   A.    I received a Bachelors degree from Princeton University in 1971. I graduated  
16          from Cornell University School of Law in 1974. From 1974 until 2001, I was an  
17          attorney with Snell & Wilmer LLP in Phoenix, Arizona, involved in general  
18          business, real estate, environmental and public utility issues. During my over 27  
19          years at the firm, I represented APS and other public utilities in numerous state  
20          and FERC proceedings involving utility rate and service matters, generation and  
21          transmission siting, electric industry restructuring, resource planning and  
22          prudence reviews. In 2001, I joined APS as Senior Vice President. I assumed my  
23          present responsibilities with the Company in 2004.

24   **Q.    WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**  
25  
26

1 A. First, I explain why APS can reduce its emergency rate request by some \$67  
2 million. Next, I will respond to Staff and the Residential Utility Consumers  
3 Office ("RUCO") concerning the standards that the Commission should utilize  
4 in evaluating a request for emergency interim rates. Third, I will suggest  
5 modifications to Commission Staff's proposal regarding quarterly power supply  
6 adjustor ("PSA") surcharges as an alternative to interim relief. Finally, I will  
7 address assertions made by RUCO and Arizonans for Electric Choice and  
8 Competition/Phelps Dodge Corporation ("AECC/PD") that APS' emergency  
9 request to raise the base fuel rate on an interim basis is somehow in violation of  
10 the 2004 APS Settlement as modified by Decision No. 67744 (April 7, 2005).

11 **Q. BEFORE SUMMARIZING THE SUBSTANTIVE POINTS OF YOUR**  
12 **REBUTTAL TESTIMONY, DO YOU HAVE ANY OPENING**  
13 **REMARKS?**

14 A. Yes. I believe all the parties to this proceeding recognize that APS needs to  
15 recover its fuel and purchased power costs on a timely basis. Similarly, they  
16 appear to understand that a downgrade of Arizona's largest utility to "junk"  
17 would be a disaster for customers. They differ, however, in their assessment of  
18 the likelihood of such disaster occurring and the means necessary to avert it.

19 Clearly, granting the Company's emergency request is the best guarantee of  
20 maintaining APS' financial integrity. A combination of a lesser amount of relief  
21 providing current cash recovery, specifically the recommendation of AECC/PD,  
22 and the Staff's quarterly PSA surcharge proposal, as modified by the  
23 suggestions in my Rebuttal Testimony, would be less effective in eliminating the  
24 risk to APS and its customers of being reduced to "junk" status, but would still  
25 significantly reduce that risk. Then, in descending order, would be the modified  
26



1 Staff quarterly PSA surcharge proposal, that same proposal without  
2 modification, and finally the status quo.

3 Yet, in the final analysis, it will be the Commission, and not APS or any of the  
4 parties, which must decide how much risk to our customers is too much. For its  
5 part, APS must urge the Commission to avoid taking any unnecessary risk given  
6 the enormous stakes for customers and the state.

7  
8 **II. SUMMARY**

9 **Q. WOULD YOU SUMMARIZE YOUR REBUTTAL TESTIMONY?**

10 **A.** Yes. Declines in fuel prices between November 2005 and the end of February  
11 2006, although perhaps temporary, have allowed APS to reduce its request for  
12 emergency rate relief to \$232 million. As was the case with our original request,  
13 these interim rates will be subject to refund, reflect normal Palo Verde  
14 operations, and represent fuel and purchased power costs for which APS has  
15 been assured by the Commission will be recovered from APS customers.

16 The reduction in our emergency request does not diminish in any way the fact  
17 that APS is clearly facing an emergency by any measure of that term – an  
18 emergency requiring prompt and decisive Commission action. RUCO has,  
19 unfortunately, misstated the criteria for emergency relief. This issue is discussed  
20 at some length in a legal memorandum that I asked to be prepared and filed in  
21 this Docket in response to a request by Commissioner Mayes. RUCO has then  
22 misapplied those criteria to the specific facts of this case, leading to the incorrect  
23 conclusion that an interim increase in the base fuel rate is inappropriate. Staff,  
24 although not citing the same legal authority as RUCO, comes to a similar  
25  
26

1 conclusion, albeit for apparently different reasons that seem to be more about  
2 timing of the "emergency" than its existence.

3 Staff's alternative to an interim increase in the base fuel rate, quarterly PSA  
4 surcharge requests based on what Decision No. 68437 (February 2, 2006) calls  
5 the "PSA Tracking Account," is a creative attempt to address our shared  
6 concerns over the timely recovery of fuel and purchased power costs and the  
7 threat of a credit ratings downgrade to "junk" levels. However, I believe some  
8 modifications and enhancements to that proposal would be required if there is to  
9 be a reasonable chance that the proposal would achieve its intended purpose,  
10 which is to have credibility with the credit rating agencies, thus avoiding a  
11 disastrous ratings downgrade, and have a meaningful impact on the continued  
12 buildup of uncollected fuel and purchased power costs. And as noted earlier,  
13 even this modified Staff proposal would have to be accompanied by some  
14 substantial interim rate relief to have close to the same impact as the Company's  
15 request in reducing the risk of such a ratings downgrade.

16  
17 Finally, neither the 2004 APS Settlement nor Decision No. 67744 prohibits the  
18 Commission from increasing the base fuel rate in an interim basis.

19 **III. REVISED EMERGENCY REQUEST**

20 **Q. CAN APS REDUCE ITS REQUEST FOR EMERGENCY INTERIM**  
21 **RELIEF IN LIGHT OF CHANGES IN FUEL PRICES SINCE**  
22 **NOVEMBER 2005?**

23 **A.** Yes. Although we have no assurance that the February 28, 2006 prices used by  
24 Mr. Ewen in his Rebuttal Testimony will hold for the balance of the year, to be  
25 consistent with how the original \$299 million request was formulated, we  
26 reduce the request for emergency rate relief by some \$ 67 million.

1 Q. IS IT UNUSUAL TO UPDATE FUEL AND PURCHASED POWER  
2 COSTS IN RATE PROCEEDINGS?

3 A. Not at all. It was done in our last general rate proceeding, albeit only to 2003  
4 levels. I am quite sure that the fuel and purchased power costs in the general rate  
5 case that the Company resubmitted on January 31, 2006, which were the basis  
6 for our emergency request (reflecting November 30, 2005 prices), will be  
7 updated again later this year and could be either higher or lower than the original  
8 \$299 million annual increase in such costs.

9 Q. IF APS HAD NOT REDUCED ITS EMERGENCY REQUEST BY THIS  
10 \$67 MILLION, WOULD THE REDUCTION IN FUEL COSTS HAVE  
11 BEEN REFLECTED IN THE PSA MECHANISM?

12 A. Yes, and that is an important point to make. This emergency request only seeks  
13 recovery of costs that will be collected from APS customers through the PSA or  
14 through base rates or through some combination of the two in any event. If APS  
15 receives interim rate relief, there will be fewer dollars to collect through the  
16 PSA. If it gets no interim relief or something in-between, there will be more  
17 dollars to collect through the PSA. In the latter case, however, APS customers  
18 also face the prospect of paying massive increases in capital and operating costs,  
19 as described by Mr. Brandt, on top of these fuel cost dollars if the Company  
20 goes to "junk" for the first time in its over 100-year history.

21 Q. IF FUEL PRICES CONTINUE TO CHANGE BETWEEN NOW AND A  
22 FINAL DECISION ON THE GENERAL RATE CASE, IS THERE A  
23 POSSIBILITY THAT APS CUSTOMERS COULD IN SOME WAY  
24 "OVERPAY" UNDER THE COMPANY'S PROPOSAL?

25 A. No. First, I again note that the interim rates are subject to refund if APS cannot  
26 justify this level of rate relief in the permanent rate case. Second, as I also have  
stated above, any interim rate relief will offset, dollar for dollar, future PSA  
charges and reduce the amount of interest that APS customers will pay on PSA

1        deferrals. Finally, the interim request, to the extent granted, will reduce dollar  
2        for dollar the net impact of the Commission's final decision in the Company's  
3        permanent rate case.

4        IV.    CRITERIA FOR EMERGENCY RATE RELIEF

5        Q.    **WHY DOES RUCO CONCLUDE THAT NO EMERGENCY EXISTS?**

6        A.    At pages 5-6 of her testimony, Ms. Diaz Cortez references Op. Atty. Gen. No.  
7        71-17 as requiring that APS meet one of three "criteria" for emergency rate  
8        relief: (1) insolvency; (2) sudden change [in costs] that brings hardship to the  
9        utility; and (3) inability to maintain adequate service pending a permanent rate  
10       decision. Even assuming that this Opinion of 35 years ago is believed  
11       controlling as to the extent of this Commission's constitutional power and duty  
12       to establish "just and reasonable" rates, Op. Atty. Gen. No. 71-17 clearly  
13       identifies the above circumstances as only examples of when emergency relief is  
14       appropriate and not an all-inclusive list of "criteria." The Opinion also states ".  
15       . the inability of the Commission to grant permanent relief within a reasonable  
16       time would be grounds for granting emergency relief."

17  
18       That the Commission, as well as regulators in other states, can and have  
19       concluded that a broad variety of circumstances beyond the limited list set forth  
20       in Op. Atty. Gen. No. 71-17 (including those now facing APS) provide the basis  
21       for emergency relief is set forth in the Company's extensive legal memorandum  
22       filed concurrently with this Rebuttal Testimony. I will not attempt to repeat that  
23       analysis here. I do note that this view of the Commission's broad authority to  
24       determine what is an "emergency" is actually supported by the closing words of  
25       Op. Atty. Gen. No. 71-17 itself:  
26

1 Perhaps the only valid generalization on this subject [of  
2 what constitutes an "emergency"] is that interim rate relief is not  
3 proper merely because a company's rate of return has, over a  
4 period of time, deteriorated to the point that it is unreasonably  
5 low. [Emphasis supplied.]

6 **Q. EVEN IF THE ATTORNEY GENERAL OPINION'S LIST OF**  
7 **CIRCUMSTANCES UNDER WHICH EMERGENCY RELIEF WAS**  
8 **CLEARLY APPROPRIATE WERE BOTH BINDING ON THE**  
9 **COMMISSION AND ALL-INCLUSIVE, WOULD APS SATISFY ONE OR**  
10 **MORE OF THESE "CRITERIA?"**

11 **A.** Yes. I believe APS is being damaged and is threatened with far greater damage  
12 by the escalation in unrecovered fuel and purchased power costs this year. If, as  
13 testified to by other APS witnesses, this damage results in a down-grade to  
14 "junk" status, the Company's ability to provide adequate service in the long run  
15 will likely be adversely affected irrespective of the outcome of the pending  
16 general rate case. Third, the Commission cannot act quickly enough on the  
17 general rate case to affect 2006. Thus, the Company is faced with up to three of  
18 the four circumstances explicitly listed by the Attorney General in his 1971  
19 Opinion.

20 **Q. STAFF CONCLUDES THAT NO PRESENT EMERGENCY EXISTS BUT**  
21 **THAT "ADDRESSING SUCH BUILD-UPS [OF DEFERRALS] ON A**  
22 **MORE TIMELY BASIS MAY HELP AVERT A FINANCIAL CRISIS OR**  
23 **ADDITIONAL CREDIT DOWNGRADING LATER THIS YEAR." DO**  
24 **YOU AGREE?**

25 **A.** Whether you believe the axe will fall soon, absent Commission action to address  
26 the problem of unrecovered fuel and purchased power costs, as does the  
Company, or some six months from now, as may be Staff's belief, the result is  
the same. APS needs action now. The Attorney General was very clear that the  
objective of emergency relief ought to be to prevent the anticipated harm from  
occurring and not just to try to fix it after the fact or even to see just how close  
to the brink of disaster the Commission can go before acting to avert it.

1 Q. DO ALL INTERVENOR WITNESSES CONCLUDE THAT THERE IS NO  
2 EMERGENCY?

3 A. No. The witness for AECC/PD (Mr. Higgins), who has reviewed or participated  
4 in many such proceedings, did conclude that the risk of downgrade was  
5 sufficient to constitute the basis for emergency rate relief. He therefore  
6 recommended an emergency increase of 7.8%, which if implemented May 1, as  
7 he recommends, would produce approximately \$126 million in additional  
8 revenues in 2006.

9 V. MODIFICATIONS TO THE STAFF PROPOSAL FOR QUARTERLY PSA  
10 SURCHARGE REQUESTS

11 Q. DOES STAFF APPEAR TO SHARE THE COMPANY'S CONCERN  
12 OVER THE TIMELY RECOVERY OF FUEL AND PURCHASED  
13 POWER COSTS AND THE NECESSITY OF PREVENTING FURTHER  
14 DOWNGRADES TO THE COMPANY'S CREDIT?

15 A. I believe so. At page 26, lines 2-5, of his testimony, Staff witness Ralph C. Smith  
16 states:

17 In my opinion, the first alternative [quarterly PSA surcharges] is  
18 preferable to the second [status quo] because it provides for a  
19 means, other than another emergency rate increase request filing,  
20 for addressing recovery of APS's actual fuel and purchased  
21 power costs in a manner that is more likely to alleviate or prevent  
22 a financial crisis situation from developing later in 2006.

23 Later, Mr. Smith is asked the following question and gives the following  
24 response:

25 Q. Does Staff continue to support the concept that addressing  
26 APS's under-collection as soon as possible rather than  
later is preferable?

A. Yes. Staff believes that prompt action on PSA surcharge  
requests is a better and more appropriate way to address  
the Company's growing deferred fuel balance than is the  
Company's request for emergency rate relief.

Testimony of Ralph C. Smith at 28, lines 16-20 [emphasis supplied].

At page 18, Mr. Smith further states in response to the question below:

1 Q. Would a downgrading of APS's debt to "junk" status be a  
2 desirable outcome?

3 A. No, it would be not. In addition to resulting in increased  
4 borrowing cost, such a downgrade could impede the  
5 Company's access to credit.

6 Staff witness J. Randall Woolridge echoes at least some of these same  
7 sentiments at page 9 of his testimony.

8 **Q. WHAT DID STAFF PROPOSE REGARDING THE PSA AS A  
9 SUBSTITUTE FOR THE COMPANY'S REQUESTED INCREASE IN  
10 THE BASE FUEL RATE?**

11 A. At pages 31-33 of his testimony, Staff witness Smith suggests that APS be  
12 permitted to file PSA surcharge requests quarterly, beginning on June 30, 2006  
13 (which would address the first two quarters of 2006) based on the under-  
14 recoveries of fuel and purchased power costs during the preceding quarter(s) as  
15 reflected in the PSA Tracking Account. Staff would process such surcharge  
16 requests in no more than thirty (30) days. The Commission would presumably  
17 then act on Staff's recommendation in some unspecified way at some  
18 unspecified future time. This authority to make quarterly PSA surcharge filings  
19 and the expedited review process would remain in place until a final order in the  
20 Company's pending general rate case (Docket No. E-01345A-05-0816), at  
21 which time the Commission could address other structural improvements to the  
22 PSA. Staff witness Smith also suggests that specific information be provided  
23 with each such quarterly PSA surcharge request and that Staff be notified at least  
24 ten (10) days in advance of such a request.

25 **Q. WHAT IS THE COMPANY'S REACTION TO THIS ALTERNATIVE PSA  
26 SURCHARGE PROPOSAL?**

1 A. We are appreciative of Staff's attempt to forge a creative solution to a very  
2 serious problem that has led to a looming disaster that will irreparably harm the  
3 Company, its customers and our state. As can be seen by Mr. Brandt's testimony  
4 (see Brandt Attachment DEB-23 and the accompanying testimony), the Staff  
5 proposal, using some fairly aggressive assumptions as to how it would actually  
6 work in practice, could lead to an improvement in the Company's key financial  
7 ratio in 2006, but only to a point that remains still well within the "junk"  
8 category. Thus, the risk of further down rating is not reduced to the same extent  
9 as would be the case with a grant of significant interim relief or even to the  
10 extent it would by a combination of the two (i.e., a combination of an interim  
11 rate increase and quarterly surcharges), as is also discussed by Mr. Brandt.  
12 Moreover, for this Staff alternative to have any credibility with the rating  
13 agencies, it must have more certainty associated with its implementation and the  
14 timeliness of actual cash recovery of the PSA Tracking Account balances.

15 **Q. STAFF ALSO RECOMMENDS PROMPT ACTION ON THE**  
16 **COMPANY'S REQUESTED \$15 MILLION PSA SURCHARGE**  
17 **RELATED TO 2005 PSA DEFERRALS [TESTIMONY OF RALPH C.**  
**SMITH AT 30]. DO YOU AGREE?**

18 A. Yes. APS has requested that such surcharge be implemented concurrently with a  
19 Decision in this Docket. Given the support of Staff and other intervenors for this  
20 surcharge, I would ask that the Commission consider this PSA surcharge  
21 concurrently at the same Open Meeting.

22 **Q. HOW CAN THE STAFF QUARTERLY PSA SURCHARGE PROPOSAL**  
23 **BE MODIFIED TO PROVIDE CERTAINTY AND TIMELINESS?**

24 A. If the Commission were to prefer the riskier (riskier from the standpoint of  
25 maintaining the Company's investment-grade credit rating) Staff proposal to the  
26 Company's emergency interim rate request, APS would request some procedural



1 "structure" to the Staff proposal to allow for more certain and timely  
2 implementation of these quarterly PSA surcharge requests. I cannot  
3 overemphasize how critical these two factors, certainty and timeliness, are to the  
4 credit rating agencies. At the same time, the Company is willing to accept some  
5 restrictions on its use.

6 **Q. PLEASE EXPLAIN.**

7 A. Specifically, I would request that PSA surcharge requests be treated similar to  
8 changes in the Annual PSA Adjustor rate, i.e., they would become effective  
9 automatically thirty (30) days after filing unless Staff's review uncovers some  
10 extraordinary circumstance requiring Commission action. This certainty is  
11 critical given the present circumstances facing the Company, where there is so  
12 much doubt and skepticism expressed in the capital markets, and particularly by  
13 the rating agencies, over the ability of APS to actually collect its fuel and  
14 purchased power costs on a timely basis. And, of course, any PSA revenues,  
15 whether surcharges or annual PSA charges, are always effectively subject to  
16 later refund if found to be imprudent.

17  
18 Other changes that would add certainty and timeliness to cost recovery under a  
19 quarterly surcharge would be up-front determinations by the Commission in this  
20 proceeding that the PSA surcharge request would amortize the end-of-quarter  
21 PSA Tracking Account balance over the succeeding twelve (12) months based  
22 on projected retail sales. Also, interest would accrue on the unrecovered PSA  
23 Surcharge balance(s) just as it would have had the unrecovered costs remained  
24 in the PSA Tracking Account.

1 To facilitate the use of this expedited process and because it is essential that cost  
2 recovery be as certain as possible, APS would agree with all of Staff's reporting  
3 and filing conditions as set forth at pages 23 and 32 of Mr. Smith's testimony.  
4 APS would further agree not to seek recovery through this expedited process of  
5 the net additional replacement power costs incurred as a result of unplanned  
6 outages at its fleet of base load units (Palo Verde, Four Corners, Cholla, and  
7 Navajo) in excess of the Effective Forced Outage Rate ("EFOR") used both in  
8 the Company's 2006 budget and in determining its normalized fuel/purchased  
9 power costs in the general rate filing. (EFOR is a commonly used term in the  
10 electric industry and can easily be verified by Commission Staff.) By net  
11 additional costs, I mean that APS would take into consideration the savings from  
12 units operating better than budgeted in determining the overall net impact of  
13 base power plant performance on fuel costs. Such temporarily excluded costs  
14 would continue to remain in the PSA Tracking Account or the Paragraph 19 (d)  
15 Balancing Account, as appropriate, without prejudice to their later recovery as  
16 presumptively prudent costs. Finally, so that the excluded net unplanned outage  
17 costs do not remain in limbo indefinitely, APS would request that within 120  
18 days from the end of a calendar year 2006, Commission Staff conduct a review  
19 of the 2006 outage costs and make a recommendation to the Commission  
20 relative to their collection through the PSA.

21 **Q. WOULD THIS REVIEW OF OUTAGE COSTS YOU SUGGEST ABOVE**  
22 **AFFECT THE COMPANY'S PENDING REQUEST FOR A \$45**  
23 **MILLION PSA SURCHARGE?**

24 **A.** No. That surcharge request is for 2005 costs and is being reviewed by Staff in an  
25 already pending docket.  
26

1 Q. WHAT ELSE SHOULD THE REVIEW OF EXCLUDED 2006 COSTS  
2 INCLUDE?

3 A. In addition to determining the recovery of the 2006 outage costs excluded from  
4 the quarterly PSA surcharge process, the Commission should consider  
5 developing a procedure for dealing with such outage costs in the future. This  
6 policy should recognize the entire range of power plant performance, as well as  
7 traditional prudence standards. It should similarly reflect the universal reality  
8 that all machines fail at one time or another and that power plants are no  
9 exception. An unplanned outage is not proof or even evidence of imprudence.

10 Q. WILL THE STAFF'S PROPOSAL, AS MODIFIED PER YOUR  
11 REQUEST, MAKE IT LESS LIKELY THAT THE COMPANY WILL NOT  
12 BE DOWNGRADED TO "JUNK?"

13 A. Possibly, but as Mr. Brandt testifies, the risk of downgrade will still be very  
14 significant if all the Commission does is approve Staff's quarterly surcharge  
15 proposal as I have modified it. Given the tremendous stakes for APS customers  
16 and this state in avoiding such a circumstance and the lack of any benefit to  
17 customers from delaying recovery of costs for which the Commission has  
18 already assured recovery (subject to any subsequent prudence review), one has  
19 to ask if that is a risk the Commission wants to take. That is why APS continues  
20 to maintain that its requested emergency rate relief is clearly the better and safer  
21 course of action. But, if the Commission is unwilling to grant the requested  
22 emergency rate relief, Staff's alternative proposal as I have modified it would  
23 increase the chances of staving off such a downgrade as compared to either the  
24 status quo or the Staff proposal without the modifications discussed in my  
25 testimony. And as Mr. Brandt also discusses, there could be a combination of my  
26 suggested changes to the Staff proposal and some amount of interim rate relief  
(as suggested by AECC/PD witness Higgins) that would further reduce the

1 likelihood of a downgrade to "junk". In other words, these alternatives or any  
2 combination of them carries a greater risk of a downgrade to "junk" than does  
3 the Company's interim rate request, but they do reduce the risk to some extent.

4 **Q. WHAT WOULD BE THE RATE IMPACT OF THE STAFF PROPOSAL**  
5 **AS MODIFIED BY YOUR RECOMMENDATIONS?**

6 A. We have presently estimated that the first surcharge request, which would be  
7 filed no sooner than June 30, 2006, would be roughly some \$33 million, or  
8 1.5%. The second, filed no sooner than September 30, 2006, would be in the  
9 area of \$144 million, or 6.4%. I must caution that these numbers are based on  
10 forecasts of customers, weather, fuel prices, etc. These factors can and will  
11 change throughout the course of 2006.

12 It is unlikely that APS would seek a PSA surcharge on December 31, 2006,  
13 because the PSA deferrals for the fourth quarter of 2006 would be picked up in  
14 the resetting the annual PSA Adjustor Rate February 1, 2007 in any event. These  
15 deferrals are presently estimated in the \$11-12 million range. This would reduce  
16 the annual PSA Adjustor Rate in 2007 from its current four mills per kWh to  
17 approximately .4 mills or roughly a 4% reduction, although the projected  
18 deferrals for the fourth quarter of 2006 are subject to the same caveats I gave  
19 with regard to those of earlier quarters of this year.

20  
21 **Q. HOW WOULD THESE MODIFICATIONS IMPACT THE COMPANY'S**  
22 **FINANCIAL METRICS IN 2006 AS COMPARED WITH THE STAFF**  
23 **PROPOSAL?**

24 A. As can be seen in Mr. Brandt's rebuttal (Attachment DEB-23), there is some  
25 incremental improvement in 2006 as a result of my changes to Staff's proposal.  
26 But the improvement is not dramatic and still leaves the Company in the "junk"  
category. The reason why my suggested changes are so important is that they

1 provide for greater certainty and timeliness of cost recovery, something that is of  
2 critical concern to the ratings agencies. Combined with the Commission's  
3 actions in Decision No. 68437 and the agreement by Staff to consider further  
4 PSA reforms in the general rate case, APS would at least be able to point to a  
5 pattern of regulatory actions that are attempting to deal with the problem of  
6 skyrocketing PSA balances and chronic ongoing under-recovery of fuel and  
7 purchased power costs.

8 VI. RESETTING THE BASE FUEL RATE ON AN INTERIM BASIS IS NOT A  
9 VIOLATION OF EITHER THE 2004 APS SETTLEMENT OR DECISION  
10 NO. 67744

11 Q. BOTH AECC/PHELPS DODGE AND RUCO HAVE CONTENDED THAT  
12 RESETTING THE BASE FUEL RATE PRIOR TO THE CONCLUSION  
13 OF THE GENERAL RATE CASE IS SOMEHOW PROHIBITED BY THE  
14 2004 APS SETTLEMENT OR DECISION NO. 67744. DO YOU AGREE?

15 A. No. I see no such limitation in either the Settlement or the Commission's order  
16 approving, with modifications, that settlement, and neither RUCO nor  
17 AECC/Phelps Dodge has pointed out such a limitation.

18 Q. DOESN'T RESETTING THE BASE FUEL RATE IMPACT THE  
19 AMOUNT OF COSTS APS MUST ABSORB UNDER THE 90/10  
20 SHARING MECHANISM IN THE PSA?

21 A. It could, depending on whether and to what extent the increase in the base fuel  
22 rate is made permanent at the end of the general rate case. However, the 90/10  
23 sharing mechanism was intended to provide an incentive to the Company to  
24 manage fuel and purchase power costs prudently and not to be an automatic  
25 penalty against the Company. As noted by Staff witness William Gehlen, 2006  
26 fuel and purchased power costs are pretty much fixed at this point, and the  
requested interim base fuel rate already incorporates normal operation of all of  
the Company's power plants. Thus, continuing to require APS to absorb 10% of

1 the increases in fuel costs since 2003 for the unknown duration of the general  
2 rate proceeding is just that, a penalty, which I do not believe can be justified as a  
3 meaningful incentive.

4 VII. CONCLUSION

5 Q. DO YOU HAVE ANY CONCLUDING REMARKS?

6 A. Yes. APS is presently facing an emergency even if there is a debate over  
7 precisely when the acknowledged harm may occur. The time to act is before the  
8 harm can occur rather than after it is too late. The Staff's alternative proposal of  
9 quarterly PSA surcharge applications, if desired by the Commission, should be  
10 modified to make implementation of such surcharges more certain and timely.  
11 Only then does the Company believe it will have the intended effect of reducing  
12 the likelihood of further deterioration of the Company's credit. And if combined  
13 with significant emergency relief, the Staff proposal as modified would  
14 significantly reduce such likelihood. Finally, APS does not believe its original  
15 proposal to increase the base fuel rate on an interim basis is a violation of either  
16 the letter or spirit of Decision No. 67744 or the 2004 APS Settlement.

17  
18 Q. DOES THIS CONCLUDE YOUR PREFILED REBUTTAL TESTIMONY  
19 IN THIS PROCEEDING?

20 A. Yes.  
21  
22  
23  
24  
25  
26

EXHIBIT

APS-2

Admitted

**DIRECT TESTIMONY OF DONALD E. BRANDT**

**On Behalf of Arizona Public Service Company**

**Docket No. E-01345A-06-0009**

January 20, 2006

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1                               **DIRECT TESTIMONY OF DONALD E. BRANDT**  
2                               **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**  
3                               **(Docket No. E-01345A-06-0009)**

4    I.    INTRODUCTION

5    Q.    **PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

6    A.    My name is Donald E. Brandt. I am Executive Vice President and Chief  
7           Financial Officer for both Pinnacle West Capital Corporation ("Pinnacle West")  
8           and Arizona Public Service Company ("APS" or "Company"). I am responsible  
9           for the finance, treasury, accounting, tax, investor relations, financial planning,  
10          and power marketing and trading functions at Pinnacle West and APS. My  
11          business address is 400 North 5<sup>th</sup> Street, Phoenix, Arizona, 85004.

12   Q.    **WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL**  
13          **BACKGROUND?**

14   A.    I received a Bachelor of Science degree in business administration with a major  
15          in accounting from St. Louis University in 1975. Before joining Pinnacle West  
16          and APS in 2003, I was Senior Vice President and Chief Financial Officer of  
17          Ameren Corporation, the parent company of the electric and gas utilities Union  
18          Electric Company (d/b/a AmerenUE) and Central Illinois Public Service  
19          Company (d/b/a AmerenCIPS).

20          Before joining Union Electric Company in 1983, I was a manager with Price  
21          Waterhouse where I provided audit and consulting services to public companies,  
22          with a concentration in the utility industry. I am a certified public accountant  
23          and a member of the American Institute of Certified Public Accountants and the  
24          Arizona Society of Certified Public Accountants.

25  
26   Q.    **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

1 A. My testimony explains why the Company filed the Application for Emergency  
2 Interim Rate Increase and Interim Amendment to Decision No. 67744  
3 ("Application"). I discuss the nature of the emergency that the Company is  
4 facing, describe the Company's current financial condition, and summarize  
5 recent actions taken by the various credit rating agencies with respect to APS's  
6 debt. I also address the consequences of failing to act on the Company's  
7 Application in a timely fashion.

8 II. SUMMARY

9 Q. **PLEASE SUMMARIZE YOUR TESTIMONY.**

10 A. The Company confronts an emergency situation and critically needs timely  
11 action by the Arizona Corporation Commission ("Commission") permitting the  
12 Company to recover its prudently incurred fuel and purchased power costs.  
13 Without such action, the Company faces the prospect of a downgrade of its  
14 credit to non-investment ("junk") levels.

15  
16 Recently, each of the three primary credit rating agencies took adverse actions  
17 with respect to APS. Standard & Poor's ("S&P") downgraded the Company to  
18 the lowest investment grade credit rating, BBB-, just one notch above a "Junk"  
19 bond credit rating, while Fitch, Inc. put the Company on "Rating Watch  
20 Negative," and Moody's Investor Service, Inc. ("Moody's") put the Company's  
21 debt ratings under review for possible downgrade. Should the Commission deny  
22 the Company's request for emergency interim rate relief, APS's credit ratings  
23 likely will be downgraded by these nationally recognized agencies to below  
24 investment grade even with approval of the pending Power Supply Adjustment  
25 ("PSA") surcharge and the implementation of the annual PSA adjustment on  
26 April 1, 2006. Should a downgrade occur, the Company would experience

1 severely restricted access to the capital markets (both debt and equity) and  
2 commercial bank credit facilities, dramatically increased financing costs, and,  
3 consequently, decreased operational and financial flexibility.

4 The rapidly growing gap that exists today between the Company's funds from  
5 operations ("FFO") and its capital expenditures ("CapEx") significantly exceeds  
6 the shortfall that occurred during the construction of the Palo Verde Nuclear  
7 Generation Station ("PVNGS") when this Commission last granted APS  
8 interim rate relief. We must finance this shortfall in a financially prudent  
9 manner. If the Company's credit ratings fall below investment grade, the costs  
10 to customers to finance this gap increases dramatically.

11  
12 **III. APS'S FINANCIAL CONDITION AND CREDIT RATINGS**

13 **Q. DID YOU FILE AN AFFIDAVIT IN SUPPORT OF APS'S APPLICATION**  
14 **FOR EMERGENCY INTERIM RATE RELIEF?**

15 A. Yes. That Affidavit, incorporated here by reference, is attached to my Direct  
16 Testimony as Attachment DEB-1. This Direct Testimony both supplements and  
17 makes current that Affidavit.

18 **Q. ARE THE STATEMENTS MADE IN THAT AFFIDAVIT STILL TRUE**  
19 **TO THE BEST OF YOUR KNOWLEDGE?**

20 A. Yes.

21 **Q. WHAT IS THE EMERGENCY THAT THE COMPANY IS FACING?**

22 A. The emergency the Company faces has a number of interrelated facets:

- 23 1. APS has experienced an unprecedented increase in its fuel and purchased  
24 power costs since the establishment of the base fuel rate in Decision No.  
25 67744 and will continue to face significant further increases in those costs  
26

1 during 2006 due to ongoing exogenous factors and fundamental shifts in  
2 the global energy markets.

- 3 2. Because these increases are not reflected in either base rates or in PSA  
4 rates, APS' cost deferrals totaled approximately \$170 million by the end  
5 of 2005. Those cost deferrals will continue to increase in 2006 even if  
6 the Commission allows the implementation of the annual adjustment to  
7 the PSA on April 1, 2006 and approves the pending PSA surcharge –  
8 accumulating to approximately \$285 million by December 31, 2006.
- 9 3. The continued imbalance between fuel costs and cost recovery has  
10 weakened the Company's key financial indicators to the point where APS  
11 has been downgraded by one major rating agency (S&P) to the lowest  
12 investment-grade rating and put on negative watch for a downgrade by  
13 the other two (Moody's and Fitch). All three have indicated further credit  
14 downgrades should the Commission not address fuel cost recovery in a  
15 manner that promises to reverse the downward trend in the Company's  
16 financial indicators. Absent interim rate relief to address the growing  
17 undercollection of fuel costs, APS will likely suffer further downgrading  
18 by S&P and the other rating agencies to non-investment grade or "junk  
19 bond" status for the first time in its over 100-year history of service to the  
20 public in Arizona. As such, APS would rank among the least  
21 creditworthy, non-bankrupt utilities in the United States.
- 22 4. A credit rating agency downgrade of APS to non-investment grade would  
23 increase interest expense in 2006 by at least \$10,000,000 to \$15,000,000.  
24 This increase in annual interest expense would continue to rise inexorably  
25 to between \$115,000,000 and \$230,000,000 by 2015. Cumulatively, over  
26 the ten-year period ended 2015, the increased interest expense would

1 aggregate between \$625,000,000 and \$1,200,000,000, depending upon  
2 the general level of interest rates and access to the capital markets by  
3 non-investment grade issuers. This market has shown much greater  
4 volatility than the investment grade sector. Our customers would  
5 eventually bear these massive costs.

- 6 5. Credit limitations imposed on APS as a result of a further downgrading  
7 will increase the cost of both fuel acquisition and purchased power, thus  
8 ultimately burdening APS customers with costs that could be avoided by  
9 timely and positive Commission action. Restraints on credit also  
10 consume already scarce cash resources needed to fund important and  
11 critical infrastructure improvements and expansion. The consequences of  
12 a credit downgrade include higher collateral requirements, reduced  
13 liquidity as certain vendors declined to enter into contracts with APS, and  
14 onerous cash constraining prepayment requirements for power, gas, gas  
15 transportation, and coal.
- 16 6. History has demonstrated that once a company experiences an important  
17 credit downgrade, it takes years of sustained positive regulatory action to  
18 reverse the situation. Unfortunately, the high cost debt incurred and  
19 alluded to above will continue to exert a negative influence on the  
20 Company's financial and cash situation, until such time as APS can call,  
21 refund or retire it.
- 22 7. Without an interim raising of the \$776.2 million "cap," APS will be  
23 unable to defer some \$65 million in 2006 presumptively prudent fuel  
24 costs, thus potentially affecting its ability to ever recover such sums.
- 25 8. Based on published reports, the pending APS general rate case will  
26 apparently not be decided within a reasonable time, by which the

1 Company means within time to prevent the above circumstances from  
2 happening. And even a 100% favorable outcome from that proceeding  
3 likely would not be sufficient to result in an upgrade of APS or undo  
4 the loss to APS during 2006 resulting from the \$776.2 million "cap."  
5 The financial markets pay close attention to the comments of all  
6 regulatory bodies. Currently, they do not see any reasonable prospect  
7 of a prompt adjudication of the Company's general rate case filed in  
8 November, 2005. In its December 21, 2005 publication explaining the  
9 ratings downgrade, S&P stated: "Recent public statements by the ACC  
10 suggest spring 2007 may be the earliest a decision could be expected."

11 We urge the Commission to re-examine the difficult current situation in light of  
12 all the relevant facts and to balance the many interests in a manner that avoids  
13 causing "serious damage" to APS and its customers.

14  
15 We only ask APS customers to pay for the fuel costs necessary to serve them,  
16 without profit or mark up. Ultimately, they will bear the price, whether paid in  
17 the form of interim rates, PSA charges and/or higher base rates resulting from  
18 Docket E-01345-05-0816. Should the Commission later determine that APS  
19 imprudently incurred such costs, our customers will receive a refund or other  
20 appropriate adjustment.

21 As customary in a regulated environment, customers receive full protection from  
22 a grant of interim relief later found unwarranted or inappropriate by the  
23 Commission's periodic review of the prudence of the Company's actions. We  
24 urge the Commission, in effect, to protect the customers from the higher costs  
25 that will accompany the Company's descent into "junk bond" status. We  
26

1 believe that the prevention of such a credit downgrade and the attendant adverse  
2 consequences serves the best interest of all the parties involved. None of us  
3 want to attempt the even more difficult time-consuming and costly attempt to  
4 repair damaged credit ratings.

5 **Q. HAVE THERE BEEN ANY DEVELOPMENTS SINCE THE DATE OF**  
6 **YOUR AFFIDAVIT?**

7 A. Yes. Since the filing of my Affidavit in Support of the Application, S&P issued  
8 an additional Research Summary regarding APS on January 6, 2006, and both  
9 Moody's and Fitch have taken negative ratings actions regarding the Company.

10 **Q. DO YOU BELIEVE THOSE ACTIONS PROVIDE FURTHER SUPPORT**  
11 **FOR THE COMPANY'S REQUEST FOR EMERGENCY INTERIM**  
12 **RATE RELIEF?**

13 A. Yes. All of the rating agencies recognize the urgency of the Company's need for  
14 recovery and have taken negative ratings actions in light of that concern. The  
15 Company incurred fuel and purchased power costs in a prudent and  
16 commercially responsible manner to serve customers. Without prompt and  
17 positive action by the Commission, the Company faces almost certain  
18 downgrade to "junk" status. Should that occur, APS and its customers face a  
19 long and costly road ahead due to steeply increased financing costs and other  
20 negative ramifications as set forth in my Affidavit.

21 **Q. PLEASE PROVIDE ADDITIONAL DETAIL ON S&P'S JANUARY 6,**  
22 **2006 RESEARCH SUMMARY.**

23 A. On January 6, 2006, S&P issued a research summary in light of the  
24 Administrative Law Judge's Recommended Opinion and Order in the  
25 Company's pending PSA surcharge application. S&P noted that the Company's  
26 continued accumulation of deferred fuel and purchased power costs is "making

1 the need for rate relief increasingly critical for the credit ratings of the company.  
2 ...” [S&P Research Summary, January 6, 2006, at 1.] S&P also reiterated its  
3 decision to lower the Company’s credit rating to BBB- based on “concerns that  
4 the regulatory process in Arizona is not providing the company timely recovery  
5 of fuel and purchased power costs” and noted the Company’s “mounting  
6 deferral problem that is severely straining cash flows.” [Id.] Finally, S&P stated  
7 that in the absence of prompt action by the Commission “to address APS’ need  
8 for rate relief in light of steadily increasing fuel and purchased power deferrals .  
9 .. an adverse rating action or a change in the outlook is likely.” [Id. at 2]

10 **Q. WHAT ACTION HAS MOODY’S TAKEN REGARDING THE**  
11 **COMPANY’S RATING?**

12 **A.** On January 10, 2006, Moody’s placed the ratings of APS under review for  
13 possible downgrade, noting as follows:

14 Moody’s Investors Service placed the long-term [debt] ratings of  
15 Pinnacle West Capital Corporation (Pinnacle: Baa2, senior  
16 unsecured) and its subsidiaries Arizona Public Service Company  
17 (APS: Baa1, senior unsecured) and PVNGS II Funding Corp.  
18 Inc. (PVNGS II: Baa1, senior secured lease obligation bonds)  
19 under review for possible downgrade. . . .

20 The rating review follows a recommendation of an Arizona  
21 administrative law judge that APS’s application for a special rate  
22 surcharge be denied. The review is prompted by deterioration in  
23 the company’s current and projected financial metrics as a result  
24 of increased fuel and purchased power costs that the company  
25 has not been able to recover on a timely basis.

26 The review will focus on the outcomes of the various rate  
requests that APS has filed or is expected to file with Arizona  
Corporation Commission (ACC). . . .

APS and Pinnacle’s financial strength are highly dependent upon  
timely implementation of cost recovery mechanisms. . . .

Beyond 2006, supportive regulatory treatment remains key to the  
company’s ability to maintain financial strength in light of  
significant needs for capital investment to serve a growing  
service territory. . . .



1 An assessment of likely regulatory outcomes will be a significant  
2 factor in concluding the review for downgrade. The ratings of  
3 APS and Pinnacle are likely to be downgraded unless there are  
4 clear signals that APS will receive timely and full recovery of its  
increased costs such that we would expect their credit metrics to  
return to levels commensurate with those of similarly rated utility  
companies. [Moody's Rating Action, January 10, 2006.]

5 **Q. PLEASE EXPLAIN WHAT ACTION FITCH TOOK ON THE**  
6 **COMPANY'S CREDIT RATING.**

7 A. Fitch placed the Company's long-term credit ratings on Rating Watch Negative  
8 on January 6, 2006, reflecting "the likelihood of lower ratings . . . if the Arizona  
9 Corporation Commission (ACC) adopts the administrative law judge's (ALJ)  
10 proposed decision in APS' pending power supply adjustor (PSA) surcharge  
11 proceeding." [Fitch Ratings Release, January 6, 2006.] Fitch went on to state:

12 In Fitch's view, the regulatory uncertainty and prospect of further  
13 delay to the recovery of prudently incurred power supply costs is  
14 a threat to APS and PNW's creditworthiness, especially in light  
15 of the company's high and growing reliance on natural gas and  
16 purchase power. [Id.]

17 **Q. ARE THERE SIMILARITIES BETWEEN THESE THREE MOST**  
18 **RECENT STATEMENTS BY THE RATING AGENCIES?**

19 A. Yes. All three of the rating agencies point directly to the Company's  
20 increasingly critical need to recover in a timely manner fuel and purchased  
21 power costs prudently incurred to serve its customers as the basis for their  
22 negative actions. APS seeks to address this critically important issue through its  
23 Application.

24 **Q. DID YOU ATTEND THE PROCEDURAL CONFERENCE HELD ON**  
25 **JANUARY 12, 2006 IN THIS DOCKET?**

26 A. Yes.

**Q. DID YOU HEAR THE DISCUSSION REGARDING THE COMPANY'S**  
**FINANCIAL SITUATION TODAY AS COMPARED TO ITS FINANCIAL**  
**SITUATION DURING THE CONSTRUCTION OF PVNGS IN THE**  
**1980'S?**

1 A. Yes. While referencing the January 1984 APS interim rate increase,  
2 Commissioner Mayes referenced page 4 of Decision No. 53909 (January 30,  
3 1984) and noted that one of the reasons the Commission granted that increase  
4 "was that by June of 1984, APS's internal generation of funds will be practically  
5 zero if not negative." (Transcript, page 20.) Consistent with Commissioner  
6 Mayes' comment, page 4 of Decision No. 53909 contains the following finding  
7 of fact:

8 14. By June of 1984, APS's internal generation of funds will  
9 be practically zero, if not negative.

10 Q. **TO WHAT EXTENT IS THAT REFERENCE RELEVANT TO THIS PROCEEDING?**

11 A. While Decision No. 53909 uses the term "internal generation of funds," if one  
12 reads the 1983 testimony of the Company's financial witnesses, particularly the  
13 testimony of Henry B. Sargent, Jr. and Paul A. Williams and related exhibits,  
14 one would find that the term "internal generation of funds" was defined as  
15 "internal generation of funds as a percentage of capital expenditures (excluding  
16 AFUDC)."

17 The discussion of the 1984 order at last week's procedural conference may have  
18 left the Commission with an erroneous impression regarding the Company's  
19 current financial situation. Certain statements, made during the procedural  
20 conference may have led the Commission to infer that the Company's current  
21 situation is not as critical as the last time APS sought and received interim rate  
22 relief. On the contrary, I believe that the Company's current financial situation  
23 is actually worse than that of the 1980s. During those difficult times, the  
24 Company experienced a credit downgrading and ultimately received an  
25 emergency rate increase. The following chart shows that APS faces a  
26

significant shortfall between its FFO and its CapEx needs that at least equals, if not exceeds the financial obstacles it faced in the 1980s:

**APS FFO vs. CapEx (\$M)**

	1983	1984 <sup>1</sup>	1985	2005 <sup>2</sup>	2006 <sup>2</sup>
Funds from operations	\$ 223.0	\$ 300.9	\$ 375.4	\$ 459.6	\$ 520.5
CapEx	359.7	328.0	445.9	810.5	648.5
FFO less CapEx	(136.7)	(27.1)	(70.5)	(350.9)	(128.0)
FFO as a % of CapEx	62.0%	91.7%	84.2%	56.7%	80.3%

**Q. PLEASE EXPLAIN WHAT THE ABOVE CHART SHOWS.**

A. In a nutshell, the APS FFO vs. CapEx chart clearly shows how the Company's weak cash flow will drive credit ratings toward junk status. As reflected in the chart, the Company's current FFO shortfall exceeds that of the 1980's when the Company received its last emergency rate increase. APS will have no alternative but to issue ever increasing amounts of costly debt to finance that shortfall. The combination of weak cash flow and the resulting need for additional debt will result in a weaker FFO/Debt ratio, which likely will cause a downgrade of the Company to non-investment ("junk") grade. As I discuss throughout my testimony, downgrades inevitably increase borrowing costs, lower the value of common equity and contribute to higher costs to customers.

**Q. DO YOU HAVE ANY FINAL COMMENTS?**

<sup>1</sup> Interim Rates were approved for APS effective February 1, 1984 in Decision No. 53909 (January 30, 1984). Those interim rates were made permanent in Decision No. 54204 (October 12, 1984), which also granted an additional rate increase. Also in Decision No. 54247 (November 28, 1984), the Commission approved an increase in electric rates, which became effective in early 1985. During the same time period, the Commission also granted APS gas rate increases in Decisions Nos. 54056 (June 1, 1984) and 54183 (October 1, 1984)

<sup>2</sup> Figures for 2005 and 2006 reflect projected amounts. Figures for 2006 presume the Company receives the PSA Adjustor effective April 1, 2006, as well as PSA Surcharges effective in February and November 2006.

1 A. Yes. The Company will need cost effective and efficient access to the capital  
2 markets to issue more than \$1 billion of debt to fund the necessary projects that  
3 constitute the Company's substantial capital expenditure budget over the next  
4 several years. Without the interim rate relief requested in the Application, the  
5 Company's credit ratings likely will be further reduced to non-investment grade,  
6 which will lead to dramatically increased financing costs to APS and, ultimately,  
7 its customers. Once they downgrade a company, the rating agencies are  
8 reluctant to upgrade that company on the basis of one or two positive rate cases.  
9 The rating agencies likely will require supportive Commission actions over a  
10 sustained period of time before considering returning the Company to  
11 investment grade if a downgrade has occurred.

12 As an oversight regulatory body, the Commission understands that with the  
13 growth of economic activity, industry and population in our service territory, we  
14 have an obligation to the public to maintain our financial integrity and  
15 infrastructure. Reasonably priced, dependable electric power attracts commerce  
16 and people to our state, and hence, maintains and enhances Arizona's economic  
17 strength.

18  
19 **Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?**

20 A. Yes.  
21  
22  
23  
24  
25  
26

**EXHIBIT A**

**BEFORE THE  
ARIZONA CORPORATION COMMISSION**

IN THE MATTER OF THE APPLICATION OF  
ARIZONA PUBLIC SERVICE COMPANY FOR  
AN EMERGENCY INTERIM RATE INCREASE  
AND FOR AN INTERIM AMENDMENT TO  
DECISION No. 67744

DOCKET NO. E-01345A-06-\_\_\_\_\_

**AFFIDAVIT OF DONALD E. BRANDT**

**General**

1. My name is Donald E. Brandt. I am Executive Vice President and Chief Financial Officer for both Pinnacle West Capital Corporation ("Pinnacle West") and Arizona Public Service Company ("APS" or "Company"). I am responsible for the finance, treasury, accounting, tax, investor relations, financial planning, and power marketing and trading functions at Pinnacle West and APS.

2. The assertions of fact contained within the Application of the Company for emergency interim rate relief and for an interim lifting of the \$776.2 million "cap" on purchased power and fuel cost recovery are true and correct to my knowledge and belief.

3. The purpose of this affidavit also is to testify, from my personal experience and involvement as the Chief Financial Officer, regarding the financial basis for the interim rate relief request, Standard & Poor's ("S&P") recent downgrade of the APS's credit ratings, the likelihood of further adverse actions by the credit rating agencies, and the impacts on APS and its customers of such actions. If the emergency interim rate relief is approved, it should prevent a further downgrade of the Company's credit ratings. If the emergency interim rate relief requested by the Company is denied, APS's credit ratings likely will be downgraded to below investment grade (i.e., non-investment grade or "junk"). Such an action will have an immediate and dramatic adverse impact on the

1 Company and its customers in terms of severely restricted access to financing,  
2 dramatically increased financing costs, and decreased operational flexibility.

### 3 **Specific Background Facts**

4 4. In Decision No. 67744 (April 7, 2005), the Arizona Corporation  
5 Commission ("Commission") granted APS a Power Supply Adjustment Mechanism  
6 ("PSA").

7 5. The credit rating agencies viewed the approval of the PSA as one of the  
8 critical elements of Decision No. 67744. They viewed the existence of the PSA as  
9 reducing the Company's financial risk because they recognized that the PSA was  
10 designed to permit APS to recover its fuel and purchased power costs incurred to serve  
11 customers. On the other hand, the rating agencies were disappointed that the PSA  
12 approved in Decision No. 67744 has certain significant limitations, which S&P referred  
13 to as "structural weaknesses." *S&P Research Update: Outlook on PWCC and APS's*  
14 *Ratings to Stable on Resolution of Rate Case* (April 1, 2005).

15 6. The rating agencies based their analysis of Decision No. 67744 on the  
16 belief that the Commission would implement the PSA in a manner that would allow the  
17 Company to recover its fuel and purchased power costs in a timely manner. The agencies  
18 noted, however, that if APS were to lose the PSA or fail to receive timely and fair  
19 recovery of its fuel and purchased power costs, APS's financial profile would be  
20 significantly weakened. As S&P recently noted:

21 A relatively weak power supply adjustment mechanism, in combination with  
22 rapidly escalating and volatile gas prices, as well as the potential for a  
23 protracted surcharge proceeding, could cause deterioration in financial  
24 performance which, year to date, has been sub par for the rating.

25 S&P, Research Summary, Arizona Public Service Co. (October 4, 2005).

26 7. As I discuss further below, on December 21, 2005, Standard & Poor's  
("S&P") downgraded APS's credit ratings from BBB to BBB-, the absolute lowest

1 investment grade credit rating. S&P noted, however, that its decision to maintain APS's  
2 new, lower credit ratings at "stable" was based on an "expectation that the ACC will  
3 resolve at least a portion of APS's increasing deferred power costs in January 2006."  
4 Standard & Poor's, *Research Update: Pinnacle West Capital's, Arizona Public Service's*  
5 *Ratings Lowered to 'BBB-'; Outlook Stable* (December 21, 2005). With the recent  
6 issuance of the Recommended Opinion and Order in Docket No. E-01345A-05-0526, I  
7 fully expect S&P and Moody's Investor Services ("Moody's") to take negative action on  
8 APS's credit ratings unless there is some other substantial form of timely rate relief.  
9 Once such negative credit rating actions are taken, it would take dramatic and sustained  
10 regulatory support to reverse them.

11 8. S&P recently noted that the Company's "need for fuel cost recovery is  
12 becoming critical." S&P, Bulletin: No Immediate Rating Change from Draft Decision on  
13 Arizona Public Svc. Cost Recovery (January 5, 2006). That need is further highlighted by  
14 the fact that due to the recent dramatic increases in fuel prices, the Company will reach  
15 the \$776.2 million "cap" on fuel and purchased power costs well before the Commission  
16 will rule on the Company's pending rate case application. Without the lifting of the "cap"  
17 the Company's financial situation clearly will worsen even further.

#### 18 APS's Financial Condition and Credit Ratings

19 9. Each year, APS must access the capital markets to issue debt to fund a  
20 portion of the costs of the Company's infrastructure additions and improvements required  
21 to meet customer needs, including new and upgraded transmission and distribution  
22 facilities, generation plant improvements, new environmental control systems, and other  
23 service facilities. The Company's capital expenditure ("CAPX") budget for 2006 is  
24 approximately \$650 million. Over the years 2006 through 2009, the CAPX budget is  
25 more than \$3 billion. Over those same years, the Company will need to access the capital  
26 markets to issue over \$1 billion of debt to fund the projects that make up that budget,

1 even assuming its pending rate request in Docket No. E-01345A-05-0816 is granted in  
2 full and on schedule before year end.

3 10. The cost that APS must pay for the debt it must issue to fund capital  
4 expenditures is based on the credit ratings it is assigned. Every decrease in APS's credit  
5 rating increases the cost to the Company, and its customers, for the debt that must be  
6 issued. Those costs increase dramatically when a company's credit rating falls to a non-  
7 investment ("junk") grade level. For that reason, both APS and its customers have a  
8 strong interest in maintaining investment grade credit ratings.

9 11. Credit rating agencies base their credit ratings of companies on certain  
10 financial criteria that measure a company's financial health, performance and risk. The  
11 rating agencies have established financial metrics as guidelines for determining a credit  
12 rating. The key financial metric examined by the credit rating agencies is the ratio of  
13 Funds from Operations to debt ("FFO/Debt"). FFO/Debt measures the sufficiency of a  
14 company's cash flow to service both debt interest and debt principal over time.

15 12. As a result of the Company's continued inability to collect in a timely  
16 manner a significant portion of its fuel and purchased power costs, an imbalance has  
17 developed between cash revenue and cash expense. Due to this deterioration in cash  
18 flow, the FFO/Debt ratio continues to worsen.

19 13. To maintain a BBB credit rating, S&P expects a company to maintain a  
20 FFO/Debt of 15% to 22% for a Business Profile 5 and 18% to 28% for a Business Profile  
21 6. The Business Profile assigned to a company reflects S&P's assessment of the business  
22 environment in which the company operates, on a scale where 1 represents the least risky  
23 environment from an investment perspective and 10 the most risky.

24 14. On December 21, 2005, S&P changed APS to a Business Profile 6,  
25 reflecting its assessment that APS faces increased regulatory risk. S&P also downgraded  
26 APS's debt as follows:



	<u>From</u>	<u>To</u>
1 Senior Unsecured Debt	BBB	BBB-
2 Secured Lease Obligation	BBB	BBB-
3 Commercial Paper	A-2	A-3
4 Ratings Outlook	Stable	Stable

5 15. S&P expressed concern "that the Arizona Corporation Commission (ACC)  
6 is not expeditiously addressing APS's growing fuel and purchased-power cost  
7 deferrals...." S&P, *Research Update: Pinnacle West Capital's, Arizona Public Service's*  
8 *Ratings Lowered to 'BBB-'; Outlook Stable* (December 21, 2005). Put simply, S&P  
9 downgraded APS because of the substantial cash flow deficiency caused by the  
10 Company's inability to timely recover its rapidly escalating fuel and purchased power  
11 costs. Moreover, the "stable" ratings outlook was conditioned on S&P's expectation that  
12 the Commission would take steps to resolve some of the Company's deferred power costs  
13 in January 2006 in a positive manner, as well as take other steps to shore up the  
14 Company's financial metrics.

15 16. Without the approval of the emergency interim rate relief requested by the  
16 Company, APS's financial condition will suffer severe and continued deterioration, likely  
17 resulting in a credit ratings downgrade to the non-investment grade level. If the interim  
18 rate relief is denied, APS's FFO/Debt remains in the BB "junk bond" range at 16.0% at  
19 the end of 2006, even if the \$80 million surcharge is granted in the first quarter of 2006  
20 and the PSA adjustor takes place on April 1, 2006. If the \$80 million surcharge and the  
21 April 1, 2006 PSA adjustment are not granted, the Company's FFO/Debt declines even  
22 further to end 2006 at 13.3%, which is almost at the single B level.

23 17. The December 21, 2005 S&P rating action has placed APS's credit rating  
24 in the bottom quartile of all U.S. utilities. APS's borrowing costs have increased \$1  
25 million per year as a result of the S&P downgrade to BBB-. The increased costs are as a  
26

1 result of higher interest rates on commercial paper borrowings and increased bank facility  
2 costs. In addition, APS will incur an incremental 10-50 basis points or \$100,000 to  
3 \$500,000 in additional interest costs per year for each \$100 million of long-term  
4 borrowing that is needed. Further, the downgrade has imposed onerous restrictions on  
5 the Company's ability to access funds needed for its construction program.

#### 6 **Potential Future Adverse Credit Rating Actions**

7 18. Absent emergency interim rate relief, as requested in the Application, I  
8 believe that APS likely will be further downgraded to non-investment grade, "junk bond"  
9 status. Such a negative rating action will result in dramatic negative impacts to APS and  
10 its customers.

11 19 Once a utility is rated below investment grade, financing alternatives  
12 become extremely limited and the costs are exorbitant. In addition, at times the market  
13 for non-investment grade debt, the so-called "high-yield" or "junk bond" market, is  
14 closed for indefinite periods of time. If APS were to fall to a "junk" credit rating, there is  
15 absolutely no reason to have any confidence that APS could successfully issue the  
16 billions of dollars of "junk" bonds that would be required over the next ten years.

17 20. Any further degradation in APS's credit ratings from its current BBB-  
18 rating to below investment grade would cause an immediate additional annual increase in  
19 interest expense in the range of \$10 million to \$15 million. The amount of additional  
20 annual interest expense would grow to \$115 million to \$230 million by 2015. On a  
21 cumulative basis, this translates to an additional \$625 million to \$1.2 billion in interest  
22 expense between 2006 and 2015 — an increase that eventually would be passed onto  
23 customers. (The ranges of additional interest expense reflect estimated financing costs  
24 calculated using the upper and lower limits of historical interest rates for non-investment  
25 grade utility debt financings.) The impact of a downgrading from APS's current credit  
26 rating to non-investment grade would be costly on the following fronts:

- 1 a. Over the next ten years APS will need to issue almost \$5 billion of  
2 additional long-term debt to finance essential generation, environmental  
3 control, transmission and distribution construction programs and to  
4 refinance existing long-term debt as it matures. APS would have no  
5 alternative but to turn to the "junk" bond market to finance this capital  
6 need. As a result, by 2015, the Company's annual financing costs that are  
7 recoverable from customers would increase between \$110 million and \$225  
8 million over what they would have been if APS had not suffered the credit  
9 ratings downgrade to "junk" status.
- 10 b. APS has \$539 million of tax-exempt debt outstanding under remarketing  
11 programs whereby the securities are effectively issued with a daily or  
12 weekly maturity, with the intention that the securities will be continuously  
13 remarketed until their ultimate maturities in 2024 through 2034. The  
14 annual interest rate on this debt currently is in the 3.0% area. Thus, the  
15 Company currently is able to take advantage of extremely attractive short-  
16 term, tax-exempt interest rates, under the "umbrella" of a very long-term  
17 debt instrument. This debt requires bank letters of credit ("LOCs") or  
18 insurance to support its creditworthiness. The LOCs and insurance pricing  
19 are based on APS's credit ratings. Any further degradation in the ratings  
20 would increase such costs. Additionally, the investors would require a  
21 higher yield due to the increased risk associated with the lower ratings. The  
22 increased fees and additional interest would increase financing costs an  
23 additional \$4 million per year that would need to be recovered from  
24 customers.
- 25 c. Given the seasonal nature of APS's cash flows, there is a heavy reliance on  
26 commercial paper for working capital needs. APS expects to average about

\$200 million of commercial paper outstanding and could face peak liquidity needs of up to \$400 million. As a result of the recent downgrade by S&P, APS's access to the commercial paper markets has been extremely curtailed. APS's commercial paper rating is currently A-3 and P-2 by S&P and Moody's, respectively. There is a significant investor base whose investment policies prohibit investments in "Third Tier" (A-3) paper. Given that limited investor base, APS can no longer count on daily liquidity and, at best, can borrow up to one week, whereas typically commercial paper can be issued up to one year. If APS were further downgraded to non-investment grade, its access to the commercial paper market would be eliminated. At a non-investment grade ratings level, there are no investors for commercial paper. Thus, the daily liquidity that the commercial paper market offers would be lost. Rather than taking advantage of the daily flexibility afforded by the commercial paper markets, APS would be forced to turn to its more costly revolving credit agreement to satisfy its daily working capital needs. Such a situation would increase APS's overall cost of borrowing by about \$1 million per year, ultimately leading to increased costs for APS's customers.

21. A credit rating downgrade to "junk" would bring about additional negative impacts that, while difficult to quantify, carry the following additional costs and risks:

- i. APS places significant reliance on bank credit agreements that are subject to renewal on a periodic basis. The non-investment grade credit rating and forecasted weak cash flow and financial metrics, along with the unsupportive regulatory environment, would cause most banks to "run for the hills" when the credit agreements were up for renewal. The few banks that might renew would charge significantly higher prices and would add

extremely onerous covenants that, in the event of further financial stress, could potentially take APS to the brink of default and bankruptcy.

ii. APS's marketing and trading function would suffer as a result of the downgrade of APS to a non-investment grade rating. As is typical in the energy trading business, most of APS's agreements with energy trading counterparties require, in the event of a downgrade that would take APS's credit rating below investment grade, that APS provide the counterparty with cash collateral to cover the difference between the contract price and the then-existing market price of the commodity. These contractual provisions are referred to as "collateral calls." This could place a significant liquidity strain on APS at a time when the Company is least able to access the markets.

iii. In addition to cash collateral calls, energy trading counterparties place other onerous terms on their dealings with non-investment grade companies. APS would be forced to prepay for a large amount of the Company's power plant fuel needs. Any form of longer-term commodity agreement would require the Company to provide up-front cash collateral. APS's costs of doing business in the wholesale markets would increase significantly and make it much more difficult to hedge the Company's commodity positions, further increasing the Company's risk profile.

#### **The \$776.2 Million "Cap" on Fuel and Purchased Power**

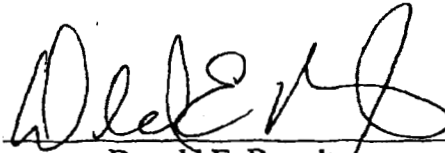
22. In Decision No. 67744, the Commission imposed a \$776.2 million "cap" on the amount of fuel and purchased power costs that the Company may pass through to customers. As a result of the recent and dramatic increases in fuel and purchased power costs, the Company will hit that "cap" later this year, far sooner than anyone had anticipated.

23. Unless a decision is reached in APS's pending rate case, Docket No. E-01345A-05-0816, before year end 2006 that permanently lifts that cap, APS will be forced to forgo recovery of over \$65 million in costs that were prudently incurred to provide service to its customers. Such an event would further increase the risk that APS would be downgraded to non-investment grade.

This concludes my affidavit.

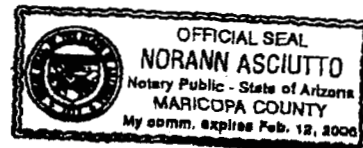
State of Arizona )  
 ) ss.  
 County of Maricopa )

I, Donald E. Brandt, having been first duly sworn, state that I have read the foregoing affidavit and that the same is true and correct to the best of my knowledge, information and belief.

  
 Donald E. Brandt

Subscribed and sworn before me this 6<sup>th</sup> day of January, 2006

  
 Notary Public





**ADJUSTMENT SCHEDULE IR-1  
INTERIM RATE ADJUSTMENT**

---

APPLICATION

The Interim Rate Adjustment ("IR-1") charge shall apply to all Standard Offer retail electric schedules, with the exception of Rate Schedules Solar-1, Solar-2, SP-1, and E-36. All provisions of the customer's current applicable rate schedule will apply in addition to this charge.

INTERIM ADJUSTMENT

In accordance with A.C.C. Decision No. XXXX, an interim rate adjustment will be made through the IR-1 charge. The adjustment will be applied to all kilowatthour sales under applicable electric schedules.

RATE

The charge shall be calculated at the following rate:

IR-1 Charge

All kWh

\$0.011161

per kWh

The following language shall be inserted as a separate paragraph in the "Adjustments" section of all applicable rate schedules:

"The bill is subject to the Interim Rate Adjustment factor as set forth in the Company's Rate Schedule IR-1 pursuant to Arizona Corporation Commission Decision No. XXXXX."

Rate schedules to be revised are as follows:

E-10  
E-12  
EC-1  
ECT-1R  
ET-1  
E-20  
E-21  
E-22  
E-23  
E-24  
E-30  
E-32  
E-32TOU  
E-34  
E-35  
E-38  
E-38-8T  
E-40  
E-47  
E-51  
E-52  
E-55  
E-58  
E-59  
E-67  
E-221  
E-221-8T



EXHIBIT

APS-3

Admitted

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**REBUTTAL TESTIMONY OF DONALD E. BRANDT**

**On Behalf of Arizona Public Service Company**

**Docket No. E-01345A-06-0009**

March 13, 2006

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1                   **REBUTTAL TESTIMONY OF DONALD E. BRANDT**  
2                   **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**  
3                   **(Docket No. E-01345A-06-0009)**

4    I.    INTRODUCTION

5    Q.    **PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

6    A.    My name is Donald E. Brandt. I am Executive Vice President and Chief  
7           Financial Officer for both Pinnacle West Capital Corporation ("Pinnacle West")  
8           and Arizona Public Service Company ("APS" or "Company"). I am responsible  
9           for the finance, treasury, accounting, tax, investor relations, financial planning,  
10          and power marketing and trading functions at Pinnacle West and APS. My  
11          business address is 400 North 5th Street, Phoenix, Arizona, 85004.

12   Q.    **HAVE YOU ALREADY OFFERED TESTIMONY IN THIS**  
13           **PROCEEDING?**

14   A.    Yes, my affidavit dated January 6, 2006, was offered in support of APS'  
15          application for an emergency interim rate increase. I submitted supplemental  
16          direct testimony on January 20, 2006.

17   Q.    **WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

18   A.    My testimony is offered in rebuttal to the written testimony filed by Staff on  
19          February 28, 2006, the written testimony filed by the Residential Utility  
20          Consumer Office ("RUCO") on February 28, 2006, and the written testimony  
21          filed by Phelps Dodge Mining Company and Arizonans for Electric Choice and  
22          Competition (collectively "Phelps Dodge") on February 28, 2006. In particular,  
23          my rebuttal testimony responds to the contentions by Staff witnesses Ralph C.  
24          Smith and J. Randall Woolridge and RUCO witness Marylee Diaz Cortez that  
25          APS is not experiencing a financial emergency that warrants emergency interim  
26

1 rate relief to recover increased fuel and purchased power costs. My rebuttal  
2 testimony also responds to the alternative suggestion made by Staff witnesses to  
3 resolve APS' financial emergency by permitting the Company to file quarterly  
4 PSA surcharge applications that would be processed by Staff and the Arizona  
5 Corporation Commission (the "Commission") on a proposed accelerated basis.  
6 In addition, my testimony responds to the contentions by Phelps Dodge witness  
7 Kevin Higgins that an interim rate increase of \$126 million in 2006 will suffice.  
8 My testimony will also identify those areas of the testimony filed by Staff and  
9 others with which APS agrees.

10 II. SUMMARY

11 Q. **PLEASE SUMMARIZE YOUR TESTIMONY.**

12 A. The Company confronts an emergency situation and critically needs timely  
13 action by the Commission permitting the Company to recover its fuel and  
14 purchased power costs on a current basis. Without such action, the Company  
15 faces a continuation of its cash flow crisis and the very real and substantial risk  
16 of a downgrade of its credit ratings to non-investment "junk" grade levels. The  
17 credit rating agencies have made it clear in their recent reports about Company  
18 that the partial relief granted by the Commission in its order of January 25,  
19 2006, will not cure the cost-recovery issues facing the Company. Furthermore,  
20 the agencies will look to the Commission for near-term, meaningful relief to  
21 deal promptly with APS' cost recovery woes to prevent further credit rating  
22 downgrades.

23  
24 In that regard, the written testimony of Staff witnesses Smith and Woolridge and  
25 RUCO witness Diaz Cortez misinterprets the recent statements of the rating  
26 agencies about the status of the Company's credit ratings. Their testimony

1 therefore seriously understates the risk and the likelihood of a further downgrade  
2 of the Company's credit ratings absent meaningful action by the Commission in  
3 this proceeding. Even the contention by Phelps Dodge witness Higgins that an  
4 interim rate increase of only \$126 million will stave off further downgrades by  
5 the rating agencies relies on incorrect assumptions and asks the Commission to  
6 expose APS to risks neither fiscally sound nor consistent with best regulatory  
7 practice.

8 Quite plainly, rating agencies expect APS to be able to recover the full amount  
9 of its prudently incurred fuel and purchased power costs on a current basis in  
10 order to ensure that APS' credit metrics remain sound. Nothing short of such  
11 full and timely recovery will eliminate the concern and the corresponding risk  
12 that APS' credit ratings will be downgraded to "junk" status. At risk are added  
13 interest expense and other costs to ratepayers of more than \$1 billion over the  
14 next decade and reduced access to capital critical to maintaining adequate  
15 service as our customer base grows.

16  
17 Furthermore, while I previously have characterized APS' predicament as a "cash  
18 flow crisis," the written testimony of Staff witnesses Smith and Woolridge and  
19 RUCO witness Diaz Cortez have obscured the core issue by their imprecise use,  
20 and treatment as synonymous, of such terms as "liquidity crisis," "cash crisis,"  
21 "default" and "financial crisis." For clarity, allow me to summarize and explain  
22 precisely the issue at hand:

23 **Non-Issues:**

- 24       • Cash on hand  
25       • Liquidity  
26       • Default under bond indentures

- Default under credit agreements

**The Core Issue:**

- As a result of the imbalance between base fuel revenues and the significantly higher current fuel and purchased power costs, there exists an extremely high probability that one or more credit rating agencies will downgrade APS' credit ratings to a non-investment grade "junk" level. Such an avoidable and regrettable result will force APS and its customers to pay over \$1 billion of additional interest and fees over the next 10 years. Additionally, such a credit downgrade would severely restrict APS' future access to the capital that will be necessary to serve our growing service territory.

In addition, Staff witness Smith offers what I believe is illusory comfort when he says (see Smith testimony at p. 18), "No, it does not" appear probable that APS' debt will be downgraded to "junk" status if the ACC does not grant the \$299 million emergency rate increase requested by APS. Similarly, Staff witness Woolridge incorrectly asserts (see Woolridge testimony p. 2) that "...recent reports from rating agencies and investment firms suggest that recent actions of the ACC appear to have stabilized the situation." These statements stand in marked contrast to the plain meaning of the following statements from a few of the most prestigious investment firms, elaborated on later in my testimony:

- **Lehman Brothers:** "...APS's credit metrics remain in junk territory..."
- **Bank of America:** "The cost of a downgrade to junk would be astronomical for customers"
- **Bank of America:** "If APS is unsuccessful in obtaining additional cash through interim rate relief, we are very concerned that S&P and the other agencies will take further action."
- **Regulatory Research Associates:** "...This regulatory lag is a source of deteriorating cash flow..."



- 1           • **Citigroup:** "...If the ACC continues...the situation could lead to a  
2           further credit downgrade..."
- 3           • **Lehman Brothers:** "This will leave PNW...at risk for further credit  
4           downgrades to below the investment grade level."
- 5           • **Bank of America:** "The credit ratings of the...utility have come  
6           under pressure of late..."

7           If APS' credit ratings are downgraded to a non-investment "junk" grade level –  
8           for the **first** time in its 100-plus year history, APS would join with only four<sup>1</sup>  
9           other investor-owned, regulated electric utilities in the U.S. whose debt  
10          securities are rated non-investment "junk" grade. As APS witness and noted  
11          economist Elliott Pollack states in his rebuttal testimony, such a result would  
12          have significant negative consequences not just for APS and its customers, but  
13          also the entire State of Arizona.

14          Finally, I will address in my rebuttal testimony the separate alternative proposals  
15          made by Staff and by Phelps Dodge witness Higgins that recognize that some  
16          emergency rate relief and/or current cost recovery is warranted and necessary --  
17          with Mr. Higgins suggesting an interim rate increase equal to \$126 million  
18          (7.8%) and Staff suggesting expedited quarterly surcharges beginning June 30,  
19          2006. As I will explain, neither of these separate proposals is a sufficient  
20          alternative to the emergency rate relief requested by APS, and even combining  
21          these alternative proposals (while certainly better than the status quo) entails  
22          significant risk that they will not be viewed as an adequate measure to deal with  
23          the mounting cash flow crisis that has APS on the brink of a non-investment  
24          "junk" grade credit rating.

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25  
26          <sup>1</sup> Nevada Power, Sierra Pacific Power, Allegheny Energy, and Westar Energy.

1 Q. PLEASE IDENTIFY OR SUMMARIZE THOSE PORTIONS OF THE  
2 TESTIMONY FILED BY STAFF AND OTHERS ON FEBRUARY 28,  
2006, WITH WHICH YOU AGREE.

3 A. First, the Staff witnesses acknowledge that the downgrading of APS' credit  
4 ratings to "junk" status would not be a "desirable outcome" and would result in  
5 increased borrowing costs for the Company. It would also impede the  
6 Company's access to credit, and ultimately increase costs for ratepayers. (See  
7 Smith testimony at p.18 and Woolridge testimony at p. 9.) The Company agrees  
8 with these statements, but the Company stresses that the financial impact on  
9 APS and ratepayers of such a downgrade to "junk" status far exceeds what these  
10 Staff witnesses have conceded. Second, the Company agrees with Staff that the  
11 \$776.2 million cap on fuel and purchased power costs referenced in Commission  
12 Decision 67744 was not intended to deny APS recovery of prudently incurred  
13 fuel and purchased power costs, that such costs in excess of the cap should  
14 continue to be deferred for review in the pending general rate case filed by APS,  
15 and that any failure by the Commission to defer those costs in excess of the cap  
16 for recovery in the general rate case would greatly exacerbate the financial  
17 emergency that the Company faces in the eyes of the credit rating agencies.  
18 (See Smith testimony pp. 8-13.) Third, the Company agrees that no surety bond  
19 (or only a nominal surety bond) is necessary to assure repayment of any  
20 potential refunds in connection with the emergency interim rate relief requested  
21 by the Company. (See Smith testimony pp. 21-22.) Fourth, the Company  
22 agrees with Phelps Dodge witness Higgins that some emergency rate relief is  
23 warranted at this time (albeit not the "bare minimum" 7.8%, \$126 million,  
24 increase proposed by Mr. Higgins). (See Higgins testimony pp.3-4.)  
25  
26

1 III. WITHOUT THE EMERGENCY RATE RELIEF APS SEEKS, THERE IS A  
2 VERY REAL RISK AND SUBSTANTIAL LIKELIHOOD THAT THE  
3 COMPANY'S CREDIT RATINGS WILL BE DOWNGRADED.

4 Q. **WHAT IS THE COMPANY'S CURRENT FINANCIAL CONDITION?**

5 A. APS confronts a financial emergency. We face an unprecedented mismatch  
6 between our recovery of purchased power and fuel costs and the bills we must  
7 pay to supply power to our customers. This cash flow crisis puts us on the brink  
8 of non-investment "junk" grade credit ratings.

9 Q. **YOU STATE THAT APS IS EXPERIENCING A CASH FLOW CRISIS. IS**  
10 **THIS THE SAME THING AS A LIQUIDITY CRISIS? IF NOT, PLEASE**  
11 **EXPLAIN THE DIFFERENCE.**

12 A. There is a significant difference between a cash flow crisis and a liquidity crisis,  
13 although several of the witnesses seem to assume they mean the same thing and  
14 have the same implications to credit quality. Liquidity crisis means a company's  
15 inability to pay its current bills as they come due. APS definitely does not have  
16 a liquidity crisis. We have access to the short-term and long-term capital  
17 markets at this time so we can raise the money needed to pay our bills.  
18 However, APS currently faces a significant cash flow crisis because of the  
19 mismatch between our cash inflows and outflows. The income statement masks  
20 the problem because the excess purchased power and fuel costs are being  
21 deferred so it appears the Company's financial condition remains viable. But  
22 APS has to borrow in order to pay its current purchased power and fuel bills.  
23 This situation leads to an inevitable, progressive and quickening deterioration in  
24 our financial health. Of necessity, therefore, both APS executive management  
25 and the rating agencies focus intensely on the timely and adequate recovery of  
26 fuel costs. Staff witness Woolridge cites the testimony of APS President Jack  
Davis at the January 2006 Commission hearing in which Mr. Davis correctly

1 notes that the rating agencies "have not expressed concern over APS' current  
2 liquidity situation," and Mr. Woolridge concludes from this that "APS appears  
3 not to believe the 'financial crisis' story that it once proclaimed." (See  
4 Woolridge testimony p.5.) Mr. Woolridge, however, has confused "liquidity"  
5 with cost recovery on a current basis. As Mr. Davis explained in his January  
6 testimony, the rating agencies have great concern about APS' ability to recover  
7 fuel and purchased power costs on a timely basis, rather than liquidity, and this  
8 carries with it the real potential for a further downgrade of APS' credit ratings.  
9 Without an immediate rate increase, our cash flow crisis will continue which  
10 almost certainly will lead to a downgrading of our credit ratings.

11 **Q. IN ORDER TO GAIN A BETTER UNDERSTANDING OF THE**  
12 **LIKELIHOOD OF A CREDIT RATINGS DOWNGRADE, COULD YOU**  
13 **PLEASE EXPLAIN WHAT A CREDIT RATING AGENCY DOES?**

14 **A.** A credit rating agency provides opinions on the creditworthiness of an entity and  
15 its financial obligations (such as bonds, preferred stock, and commercial paper).  
16 Pursuant to its regulations, the U.S. Securities and Exchange Commission  
17 ("SEC") has denominated four of these credit rating agencies "Nationally  
18 Recognized Statistical Rating Organizations" or "NRSROs." The SEC currently  
19 includes as NRSROs Standard & Poor's ("S&P"), Moody's Investors Service  
20 ("Moody's"), Fitch, Inc. ("Fitch"), and Dominion Bond Rating Services Ltd..

21 Generally, long-term debt credit ratings distinguish between investment grade  
22 and non-investment grade. For example, a credit rating agency may assign a  
23 "AAA" credit rating as its top investment grade rating for corporate bonds and a  
24 "BB" credit rating or below for non-investment grade or "junk" corporate bonds.  
25 Rating designations of both Fitch and S&P have "BBB-" as the lowest  
26

1 investment grade rating and "BB+" as the highest non-investment grade rating.  
2 Comparable rating designations of Moody's are "Baa3" and "Ba1", respectively.

3 Commercial paper<sup>2</sup> credit ratings are designated by S&P as "A-1", "A-2", "A-  
4 3", and "B", with "A-1" indicating the highest quality rating and "B" being at  
5 the low end of the spectrum. Moody's has comparable ratings designations of  
6 "Prime-1", "Prime-2", "Prime-3", and "Not Prime" (abbreviated as "P-1", "P-  
7 2", "P-3", and "NP"). Critically, no market has developed for commercial paper  
8 rated below "A-3" by S&P or "P-3" by Moody's, and even the A-3/P-3 market  
9 is of recent origin and lacks the liquidity of the market for higher grades of  
10 commercial paper.

11  
12 **Q. WHICH CREDIT RATING AGENCIES ISSUE CREDIT RATINGS ON**  
13 **APS' DEBT?**

14 A. Moody's, S&P, and Fitch issue credit ratings on APS' debt. Moody's and S&P  
15 both issue credit ratings under a formal relationship under which they have  
16 access to the Company's nonpublic financial forecasts and data for their  
17 independent analytical purposes. Fitch issues credit ratings on APS based solely  
18 on its access to publicly available financial information, data and news.

19 Within the publicly traded debt markets, Moody's and S&P have the greatest  
20 influence. With rare exception, every mutual fund, insurance company, and  
21 other institutional debt investor require an entity to obtain credit ratings from  
22 Moody's and S&P before they will consider an investment in that entity's debt  
23 securities.

24  
25 <sup>2</sup> Commercial paper is a short-term, unsecured promissory note with a maturity ranging from 1 to 270 days commonly issued by  
26 corporations to finance working capital requirements. Because the notes are unsecured, large corporations with investment grade credit  
ratings dominate the commercial paper market.

1 **Q. WHAT ARE THE CURRENT CREDIT RATINGS FOR APS?**

2 **A.** The table below lists the current credit ratings:

	<u>Moody's</u>	<u>S&amp;P</u>
3 Senior Unsecured Debt	Baa1	BBB-
4 Secured Lease Obligation	Baa1	BBB-
5 Bonds		
6 Commercial Paper	P-2	A-3
7 Ratings Outlook	Under Review For Possible Downgrade <sup>3</sup>	Stable <sup>4</sup>

8  
9 Within the spectrum of investment grade debt, the financial markets consider  
10 these above ratings low investment grade.

11 **Q. YOU MENTIONED THAT THE COMPANY NEEDS TO MEET**  
12 **CERTAIN FINANCIAL CRITERIA TO MAINTAIN ITS CREDIT**  
13 **RATINGS. WHAT ARE THESE FINANCIAL CRITERIA AND HOW DO**  
14 **THEY IMPACT THE COMPANY'S RATINGS?**

15 **A.** Credit rating agencies have established certain financial results and ratios  
16 ("metrics") as guidelines for determining a credit rating. For example, the  
17 published primary financial metrics required by S&P for a company with a  
18 business profile '6' to maintain "BBB" and "BB" category ratings are as  
19 follows:  
20  
21  
22  
23

24 <sup>3</sup> A RUR (Rating(s) Under Review) designation indicates that the issuer has one or more ratings under review for possible change in the short term.

25 <sup>4</sup> "Ratings Outlook" assesses the possible direction of a rating over the intermediate term (typically six months to two years). "Positive" indicates ratings may be raised; "Negative" indicates ratings may be lowered; and "Stable" indicates ratings are not expected to change absent some positive or negative event. The current "Stable" outlook by S&P is contingent upon "sustained regulatory support that adequately addresses the growing deferrals [of fuel and purchased power costs]." S&P Research Update dated January 26, 2006.

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	Business Profile 6	
	BBB	BB
Funds From Operations <sup>5</sup> interest coverage ("FFO Interest Coverage")	4.2 - 3.0	3.0 - 2.0
Funds From Operations to Debt ("FFO/Debt")	28% - 18%	18% - 12%
Debt to Capital	48% - 58%	58% - 62%

- Q. WHY DO THE RATING AGENCIES CONSIDER THE FINANCIAL CRITERIA IMPORTANT?**
- A.** Financial criteria measure a company's financial health, performance and risk. Although a strong relationship exists between earnings and cash flow, analysis of cash flow can reveal debt-servicing capability either stronger or weaker than otherwise apparent from earnings ratios. Thus, financial analysts use the FFO interest coverage ratio to measure the sufficiency of a company's cash flow to pay its interest costs. Debt to Capital measures a company's leverage. FFO/Debt measures the sufficiency of a company's cash flow to service both debt components - interest and debt principal - over time. FFO/Debt captures aspects of both interest coverage and the degree of leverage and, consequently, carries the most weight with the credit rating agencies in determining ratings. The FFO/Debt ratio is the only financial ratio that Moody's specifically cites in describing the reasons for their rating outlook on January 11, 2006. **Attachment DEB-19.** In its report dated January 24, 2006, S&P cites all three ratios but specifies that the FFO/Debt ratio is an important metric for Standard & Poor's. **Attachment DEB-21.**

<sup>5</sup> Funds From Operations ("FFO") is net income plus non-cash expense items such as depreciation and deferred income taxes, less non-cash income items such as fuel deferrals. Dividends are not determinate of FFO.

1 Q. IF THE PROPOSED RATES ARE IMPLEMENTED ON MAY 1, 2006,  
2 HOW DO APS' FINANCIAL METRICS COMPARE WITH THOSE  
3 NEEDED TO MAINTAIN INVESTMENT GRADE RATINGS?

4 A. Should the Commission allow the implementation of the proposed rates on May  
5 1, 2006, as well as approving APS' pending surcharge applications to go into  
6 effect on May 1 and July 1, 2006, the Company's financial metrics will improve  
7 and we should maintain our investment grade ratings. The Interest Coverage  
8 ratio improves from 3.3 times in 2005 to 4.2 times in 2006. The FFO/Debt ratio  
9 improves to 20.6% in 2006 which places it at the lower end of the acceptable  
10 range. The Debt to Capital ratio in this case deteriorates to 51.9% in 2006  
11 because capital expenditures exceed internally generated cash flows. (The first  
12 three ratios set forth in Attachment DEB-1 and Attachment DEB-2 reflect the  
13 effects of including imputed debt and interest expense attributable to purchased  
14 power agreements and to the Palo Verde Unit 2 sale and leaseback, which are  
15 adjustments made by the rating agencies.) ROE remains very weak in 2006 at  
16 8.3% which is well below the Company's approved 10.25% return on equity.

17 Q. IN DETERMINING CREDIT RATINGS, DO THE CREDIT RATING  
18 AGENCIES LOOK AT MORE THAN THE FINANCIAL METRICS YOU  
19 DETAILED ABOVE?

20 A. Yes. The determination of credit ratings includes more than financial ratio  
21 analysis. Witnesses Smith, Woolridge and Diaz Cortez all state that the  
22 FFO/Debt ratio is not the only factor considered by the agencies. I agree with  
23 those statements but not with their conclusions based on such statements. The  
24 agencies determine their ratings based on a variety of both quantitative and  
25 qualitative factors. For their quantitative analysis, the agencies look not only at  
26 the financial metrics of a company, but also at significant trends in financial  
performance. They review financial projections and make an independent



1 assessment of the likelihood of various future financial scenarios. The agencies  
2 look for financial metrics that stay within the specified target ranges.

3 In addition to the quantitative analysis, the agencies perform an extensive  
4 qualitative analysis. The rating agencies assess the regulatory environment in  
5 which a regulated utility operates, the various business and financial risks a  
6 company faces, and the utility's management and prior track record. After  
7 analyzing these quantitative and qualitative factors, the rating agencies  
8 determine a company's credit ratings. Moody's addresses this aspect of credit  
9 ratings on its website (Moody's.com):

10 Because it involves a look into the future, credit rating is by  
11 nature subjective. Moreover, because long-term credit  
12 judgments involve so many factors unique to particular  
13 industries, issuers, and countries, we believe that any attempt  
14 to reduce credit rating to a formulaic methodology would be  
15 misleading and would lead to serious mistakes.

16 That is why Moody's uses a multidisciplinary or "universal"  
17 approach to risk analysis, which aims to bring an  
18 understanding of *all* relevant risk factors and viewpoints to  
19 every rating analysis. **Attachment DEB-3**

20 **Q. HOW IMPORTANT IS THE REGULATORY ENVIRONMENT TO A  
21 RATING AGENCY'S QUALITATIVE ANALYSIS?**

22 **A.** Rating agencies view the regulatory environment as a major factor in evaluating  
23 companies. In an article *New York Regulators' Consistency Supports Electric*  
24 *Utility Credit Quality* dated August 15, 2005, S&P states:

25 Regulation defines the environment in which a utility  
26 operates and greatly influences a company's financial  
performance...To be viewed positively, regulatory treatment  
should be timely and allow consistent performance over time,  
given the importance of financial stability as a rating  
consideration. **Attachment DEB-4**

1 In another article *Industry Report Card: U.S. Electric/Water/Gas* dated July 6,  
2 2005, S&P provides an overview of utilities' ratings and opens the report by  
3 stating, "[r]egulatory rulings have once again become a dominant factor in  
4 companies' credit quality." **Attachment DEB-5**

5 Wachovia Securities, in a report *Utilities: The Dark Side of 'Back to Basics'*  
6 dated April 5, 2005, discussed the consequences of rising capital spending and  
7 the need for rate relief:

8 Utilities are coming to regulators for rate increases to recover  
9 higher fuel prices, the cost of compliance with new  
10 environmental regulations, and investments for reliability  
11 improvements and for customer growth. With higher utility  
12 spending and the rising cost of fuel, electric utility revenue  
requirements are likely to grow faster than the general level  
of inflation for many years. **Attachment DEB-6**

13 **Q. WHAT IS THE CURRENT STATUS OF APS' CREDIT RATINGS?**

14 A. APS' credit ratings are currently in the investment grade range ("BBB-" by S&P  
15 and "Baa1" by Moody's). On December 21, 2005, S&P downgraded APS'  
16 credit ratings from "BBB" to "BBB-", the absolute lowest investment grade  
17 credit rating. S&P expressed concern "that the Arizona Corporation  
18 Commission (ACC) is not expeditiously addressing APS' growing fuel and  
19 purchased-power cost deferrals...." S&P also noted that its decision to  
20 characterize APS' new, lower credit ratings as "stable" assumed "that the ACC  
21 will resolve at least a portion of APS's increasing deferred power costs in  
22 January 2006." S&P's *Research Update: Pinnacle West Capital's, Arizona*  
23 *Public Service's Ratings Lowered to 'BBB-'; Outlook Stable* dated December 21,  
24 2005. **Attachment DEB-7.** On January 26, 2006, S&P affirmed the Company's  
25 credit ratings "following the generally constructive decisions made by the  
26

1 Arizona Corporation Commission (ACC) on Jan. 25... The stable outlook is  
2 premised on the ACC providing sustained regulatory support that adequately  
3 addresses building deferrals. Negative rating actions could result if regulatory  
4 support does not continue, or if market forces or operational issues lead to  
5 significant increases in the expected 2006 deferral level." S&P's *Research*  
6 *Update: APS, PWCC's 'BBB-' Corporate Credit Ratings Affirmed On ACC Vote*  
7 *But Challenges Continue* dated January 26, 2006. **Attachment DEB-8**

8 On January 10, 2006, Moody's placed the long-term ratings of APS under  
9 review for possible downgrade. The agency declared that an uncertain  
10 regulatory environment in combination with the absence of timely recovery of  
11 increased fuel and purchased power costs precipitated this action. In its article  
12 *Moody's Places The Debt Ratings of Pinnacle West (Sr. Uns. Baa2) And*  
13 *Arizona Public Service Co. (Sr. Uns. Baa1) Under Review For Downgrade*  
14 dated January 10, 2006, Moody's wrote:

15 The review is prompted by deterioration in the company's  
16 current and projected financial metrics as a result of increased  
17 fuel and purchased power costs that the company has not  
been able to recover on a timely basis....

18 The review will focus on the outcomes of the various rate  
19 requests that APS has filed or is expected to file with Arizona  
20 Corporation Commission (ACC). Due to the substantial  
21 increase in market prices of fuel and electricity, APS is  
22 experiencing sharp cost increases. The magnitude of rate  
23 increases needed to cover these costs is sufficiently large to  
24 be likely to trigger regulatory and ratepayer resistance. In this  
context the recommendation by the administrative law judge  
does not bode well for full and timely recovery of increased  
costs....

25 There remains a significant amount of uncertainty  
26 surrounding the ultimate amount of cash that APS and

1 Pinnacle will generate in 2006. APS and Pinnacle's financial  
2 strength are highly dependent upon timely implementation of  
cost recovery mechanisms....

3 Beyond 2006, supportive regulatory treatment remains key to  
4 the company's ability to maintain financial strength in light of  
5 significant needs for capital investment to serve a growing  
service territory. **Attachment DEB-9**

6 On January 30, 2006 – five days after the Commission hearing on January 25,  
7 2006 – Fitch Inc. downgraded APS from BBB+ to BBB and indicated that a  
8 further downgrade might be warranted if the Commission does not address the  
9 significant cash flow volatility and working capital requirements caused by high  
10 and rising natural gas commodity costs. **Attachment DEB-10**

11  
12 **Q. WHAT WOULD BE THE IMPACT ON THE COMPANY'S FINANCIAL**  
13 **CONDITION SHOULD THE COMMISSION REJECT OR**  
**SUBSTANTIALLY REDUCE APS' RATE REQUEST?**

14 A. APS' financial condition would suffer prompt, severe and continued  
15 deterioration, resulting in a credit ratings downgrade to the non-investment  
16 "junk" grade level. In **Attachment DEB-2**, I show APS financial metrics  
17 assuming denial of the interim rate relief and APS' pending surcharge  
18 applications. Interest Coverage remains flat from 2005 to 2006 at 3.3 times.  
19 FFO/Debt ends 2006 at 15.1% which is significantly below the lower limit of  
20 the acceptable range. After improving in 2005 due to Pinnacle West's equity  
21 infusions of \$250 million into APS, 2006 Debt to Capital worsens to 53.1%  
22 despite Pinnacle West's equity infusion of \$210 million in January of 2006.  
23 ROE remains very weak in 2006 at 7.8% compared to the Company's approved  
24 rate of return on equity of 10.25%.

25 Moody's noted in its *Rating Action* dated January 10, 2006:  
26

1 The ratings of APS and Pinnacle are likely to be downgraded  
2 unless there are clear signals that APS will receive timely and  
3 full recovery of its increased costs such that we would expect  
4 their credit metrics to return to levels commensurate with  
5 those of similarly rated utility companies. **Attachment DEB-9**

6 The ratings agencies consider trends as well as the absolute level of the financial  
7 metrics. The rating agencies have already drawn negative inferences from the  
8 protracted time required to obtain cash recovery of deferrals and the resultant  
9 deterioration of APS' financial health.

10 **Q. COULD APS RETAIN ITS INVESTMENT GRADE CREDIT RATINGS**  
11 **UNDER THE ABOVE CIRCUMSTANCES?**

12 A. No. APS' credit ratings would very likely fall below investment grade. First,  
13 financial metrics alone would not support a continued "BBB" rating, especially  
14 in light of the continued trend of deterioration. Second, the Company could not  
15 demonstrate to the rating agencies any prospect of stopping further declines in  
16 its financial condition. The Company's financial situation would be further  
17 exacerbated should it not receive timely and fair recovery of its fuel and  
18 purchased power costs under the pending interim emergency rate request.

19 **Q. HOW IMPORTANT IS TIMELY AND SUFFICIENT RATE RELIEF TO**  
20 **APS' INVESTMENT GRADE CREDIT RATINGS?**

21 A. It is of utmost importance. As APS witness Steve Fetter discusses in more detail  
22 in his rebuttal testimony and as I have already reviewed, rating agencies monitor  
23 more than just the financial metrics. They also look at qualitative factors,  
24 ranking regulatory treatment one of the most important. S&P and Moody's have  
25 cited regulatory uncertainty as a source of credit challenge for APS. In its  
26 *Research Summary: Arizona Public Service Co.*, dated June 24, 2005, S&P  
noted:

1 APS' near-term challenges are largely related to regulatory  
2 lag. Timely recovery of costs incurred in the rate base will  
3 remain challenging for the utility....

4 The failure of PWCC or APS to meet expected financial  
5 results in 2005 and 2006, particularly in light of the weakening  
6 in consolidated and utility credit metrics in 2004, could lead to  
7 a downward revision of the outlook or a ratings change.  
8 Downward pressure on the ratings will occur if APS incurs  
9 significant power or fuel cost deferrals in excess of the fuel  
10 and purchased power adjuster's limitations. Any positive  
11 rating action is unlikely in the near term given the financial  
12 metrics and the longer-term risks that the limitations placed on  
13 APS' power supply adjuster present. **Attachment DEB-11**

14 In addition, Moody's *Analysis: Pinnacle West Capital Corporation* dated May  
15 2005, cites the regulatory environment in Arizona as unpredictable and  
16 describes it as a credit challenge. **Attachment DEB-12**

17 The rating agencies would regard the failure by this Commission to recognize  
18 the need for the rate relief contained in this request as an extremely significant  
19 negative. Such action could be interpreted by the rating agencies as indicating  
20 that the Commission will neither support APS taking the steps necessary to  
21 ensure the reliability of its system and timely address the needs of its customers  
22 nor to take measures to help the Company safeguard its financial integrity.

23 **Q. HOW IMPORTANT WAS THE COMMISSION'S APPROVAL OF THE**  
24 **PSA FROM THE RATING AGENCIES' PERSPECTIVES?**

25 **A.** The credit rating agencies viewed the approval of the PSA as one of the critical  
26 elements of the last rate case decision (the other two being the approval of the  
transfer of the PWEC assets and the modest rate increase). In its April 27, 2005,  
*Rating Action: Pinnacle West Capital Corporation*, Moody's attributed the  
change in outlook to stable for APS at least in part to the approval of the PSA.

1       **Attachment DEB-13.** The rating agencies view the existence of a PSA as  
2       reducing financial risk, especially for a company located in an area with  
3       growing customer and load requirements such as Arizona. In its May 4, 2005,  
4       *Credit Analysis: Arizona Public Service Co.*, Fitch noted that "the adoption of  
5       the PSA and transfer of the PWEC assets were, in Fitch's view, constructive  
6       developments that enhance APS's risk profile and creditworthiness."

7       **Attachment DEB-14**

8       However, S&P, in its April 1, 2005 *Research Update* on APS, reiterated that its  
9       longer-term view of the current PSA was cautious:

10               [O]ver time, it is likely that APS will need a stronger PSA to  
11               maintain its current credit ratings, particularly given the  
12               expectation that over the next five years APS' fuel mix will  
13               become heavily concentrated in natural gas. **Attachment**  
14               **DEB-15**

14       And, more recently, S&P noted:

15               A relatively weak power supply adjustment mechanism, in  
16               combination with rapidly escalating and volatile gas prices, as  
17               well as the potential for a protracted surcharge proceeding,  
18               could cause deterioration in financial performance which,  
19               year to date, has been sub par for the rating.

19       *Research Summary, Arizona Public Service Co.* dated October 4, 2005.

20       **Attachment DEB-16**

21       The agencies have noted that if APS loses the PSA or fails to receive timely and  
22       fair recovery of its fuel and purchased power costs, APS' financial profile will  
23       be significantly weakened. Each of the agencies have recently written about the  
24       importance of timely purchased power and fuel recovery to APS' financial  
25       health:  
26

1 "There remains a significant amount of uncertainty  
2 surrounding the ultimate amount of cash that APS and  
3 Pinnacle West will generate in 2006. APS and Pinnacle's  
4 financial strength are highly dependent upon timely  
implementation of cost recovery mechanisms." Moody's,  
Jan. 10, 2006. **Attachment DEB-9.**

5 "The fact that there is no vehicle within the PSA protocol to  
6 recover supply costs more frequently than annually during  
7 periods of sustained high and rising energy costs subjects APS  
8 to significant cash flow volatility and working capital  
requirements." Fitch, January 30, 2006. **Attachment DEB-10.**

9 "Regulatory uncertainty is exacerbated by the establishment  
10 in 2004 of a weak power supply adjuster (PSA) that exposes  
11 the utility to potential cash flow volatility." S&P, February  
15, 2006. **Attachment DEB-17.**

12 **Q. DO YOU AGREE WITH S&P'S CHARACTERIZATION OF THE PSA AS**  
13 **BEING WEAK? IF SO, WHY?**

14 A. Yes. From a credit strength perspective, the current PSA has several critical  
15 weaknesses. Even in light of the Commission's recent and helpful interpretation  
16 of the impact of the \$776.2 million annual "cap" on fuel cost recovery and,  
17 further, assuming the permanent lifting of the "cap" as requested by the  
18 Company, the PSA continues to have structural weaknesses that we must  
19 address. First and foremost, APS may recover pursuant to the PSA only once a  
20 year rather than when the deferral balance reaches a certain level. The  
21 triggering of both the annual adjustment mechanism and the surcharge can take  
22 place only after we calculate the year-end deferral balance. Consequently,  
23 significant increases in deferral balances during the year face considerable  
24 regulatory lag prior to recovery. Second, the annual adjuster remains capped at  
25 4 mills. This cap serves to impede timely recovery of accumulated deferrals.  
26 And third, the surcharge process has no specific timeline for cost recovery. All



1 of these issues aggravate the substantial costs associated with the Company's  
2 growing reliance on natural gas.

3 **Q. WHAT EVIDENCE IS THERE THAT THE CREDIT RATING**  
4 **AGENCIES WILL FURTHER DOWNGRADE APS' CREDIT RATINGS**  
5 **IF THE EMERGENCY RATE REQUEST IS NOT GRANTED?**

6 **A.** Contrary to the assertions made by Staff witnesses Smith and Woolridge, the  
7 rating agencies have clearly indicated that rate relief sufficient to cover APS'  
8 projected unrecovered fuel and purchased power costs overshadows all other  
9 factors in determining APS' credit ratings. For example, Fitch described the  
10 Commission's proceedings on January 25 as having both "positive and negative  
11 implications for PNW and APS' creditworthiness" and went on to state that "the  
12 only option to recover fuel and purchased power costs above amounts  
13 determined annually in the PSA would be [the] emergency rate filing."  
14 **Attachment DEB-10.** Similarly, S&P stated on January 6, 2006 (shortly after it  
15 downgraded APS to BBB-) that it "will consider not only the surcharge  
16 application, but also the ACC's response to the emergency [rate] filing" in  
17 deciding what further action to take regarding APS' credit rating. **Attachment**  
18 **DEB-18.** In addition, Moody's put APS' credit rating "under review for  
19 potential downgrade" on January 11, 2006, and stated:

20 "The rating [of APS] is likely to be downgraded unless there  
21 are clear signals that APS will receive **timely and full**  
22 **recovery** of its increased costs such that we would expect  
23 credit metrics to return to levels commensurate with those of  
24 similarly rated utility companies." **Attachment DEB-19,**  
25 **emphasis added.**

26 **Q. WHAT HAS BEEN THE TREND OF APS' CREDIT RATINGS OVER**  
**THE LAST FEW MONTHS?**

**A.** The trend of APS' credit ratings over the last few months has been universally  
downward due to the perception that APS may not be able to recover on a timely

1 basis its prudently incurred fuel and purchased power costs. To demonstrate the  
2 downward trend, I have attached hereto as **Attachment DEB-20**, various charts  
3 showing the credit rating and related comments of the three major rating  
4 agencies (Moody's, Fitch and S&P) from early 2005 to the present. The rating  
5 agencies have made it clear in their announcements that this consistent  
6 downward trend of APS' credit profile, metrics and ratings over the last year is  
7 attributable almost entirely to the concern about APS' mounting unrecovered  
8 fuel and purchased power costs.

9 **Q. DO YOU AGREE WITH THE WRITTEN TESTIMONY OF STAFF**  
10 **WITNESSES SMITH AND WOOLRIDGE THAT APS' CURRENT**  
11 **CREDIT RATING IS "STABLE" AND IS THEREFORE NOT LIKELY**  
12 **TO BE FURTHER DOWNGRADED IF THE REQUESTED INTERIM**  
13 **RATE RELIEF IS NOT FORTHCOMING?**

14 **A.** No. I disagree with their testimony and I believe they based it on an erroneous  
15 reading of the reports of the credit rating agencies. For example, Staff witness  
16 Smith cites to the January 26, 2006, S&P report for the proposition that the  
17 agency's outlook for APS is "stable." (See Smith testimony at p.14.) But Mr.  
18 Smith fails to reveal that in that same report S&P stated:

19 "The stable outlook is **premised** on the ACC providing  
20 sustained regulatory support that adequately addresses  
21 building deferrals [of fuel and purchased power costs].  
22 **Negative rating actions could result if regulatory support**  
23 **does not continue**, or if market forces or operational issues  
24 lead to significant increase in the expected 2006 deferral  
25 level." **Attachment DEB-8**, emphasis added.

26 S&P reiterated this same qualification of its "stable" outlook for APS in a report  
issued February 15, 2006 – two weeks before Mr. Smith filed his testimony in  
this matter. **Attachment DEB-17**.

1 Mr. Smith also fails to cite a Fitch report dated January 30, 2006 in which Fitch  
2 lowered its unsecured debt rating for APS from BBB+ to BBB and lowered its  
3 issuer default rating for APS from BBB to BBB-. Fitch also has the rating  
4 outlook as stable, but Fitch stated:

5 "The ACC decision in the PSA proceedings, issued on Jan.  
6 25, 2006, has positive and negative implications for PNW and  
7 APS' creditworthiness. . . . [Certain actions of the ACC on  
8 that day were] less favorable than Fitch had anticipated in its  
9 previous ratings and is a significant source of concern for  
10 PNW and APS fixed-income investors. . . . **The only option  
11 to recover fuel and purchase power costs above amounts  
12 determined annually in the PSA would be an emergency  
13 rate filing**, in which the timing and amount of rate relief  
14 would be uncertain." **Attachment DEB-10**, emphasis added.

15 Finally, when Staff witnesses Smith and Woolridge opine that a further  
16 downgrade of APS' credit rating does not seem likely because S&P and Fitch  
17 both currently state that APS has a "stable" outlook, they ignore the critical fact  
18 that S&P rated APS as having a "stable" outlook at the time that S&P  
19 downgraded APS to BBB- on December 21, 2005, and Fitch rated APS as  
20 having a "stable" outlook at the time that it downgraded APS to BBB on  
21 January 30, 2006.

22 **Q. DO YOU AGREE WITH MR. SMITH'S ASSERTION THAT S&P'S  
23 OUTLOOK OF STABLE FOR APS IS BASED ON THE ASSUMPTION  
24 THAT NO INTERIM RATE RELIEF IS GRANTED (PG. 14, LN. 23-28)?**

25 **A.** I disagree. Mr. Smith misinterprets S&P's, *Credit FAQ: Credit Issues Expected  
26 to Continue For Pinnacle West Capital Corp. And Arizona Public Service Co.*,  
dated January 24, 2006. **Attachment DEB-21**. This S&P publication sets forth  
a series of "frequently asked questions" and S&P's responses thereto. The third  
question, "What is the status of APS' emergency interim filing?" and its related  
answer is set forth on page 14, lines 11-21 of Mr. Smith's testimony. Lines 20-

1 21 contain the sentence, "Standard & Poor's forecast estimates do not assume  
2 emergency relief is granted." Mr. Smith's testimony (page 14, lines 23-27),  
3 incorrectly implies that such "forecast estimates" are associated with S&P's  
4 "stable" outlook for APS' credit ratings. Rather, "forecast estimates" refers to  
5 S&P's estimates of future deferral balance amounts set forth in the previous two  
6 questions in this S&P publication: "How large are APS' deferrals of fuel and  
7 purchased power?", and "What are the ways that APS could recover its expected  
8 deferrals?" wherein S&P details the assumptions they were making regarding  
9 additional cash recovery in 2006 in the form of the PSA annual adjustor and  
10 special surcharges.

11 Mr. Smith also states that the S&P's outlook for APS remains "stable" in S&P's  
12 report dated January 26, 2006. **Attachment DEB-8.** However, that January 26<sup>th</sup>  
13 report, which was published immediately after the conclusion of the  
14 Commission Open Meetings, has a section which specifies what the Stable  
15 outlook is based on:

16 The stable outlook is premised on the ACC providing  
17 sustained regulatory support that adequately addresses  
18 building deferrals. Negative rating actions could result if  
19 regulatory support does not continue, or if market forces or  
20 operational issues lead to significant increases in the expected  
21 2006 deferral level. **Attachment DEB-8**

22 Also, in contrast to the conclusion expressed by Mr. Smith, the very title of the  
23 S&P publication dated January 24, 2006 contains the phrase, "Credit Issues  
24 Expected to Continue...."

25 **Q. WHAT OTHER COMMENTS BY RATING AGENCIES AND**  
26 **INVESTMENTS ANALYSTS, WHICH INDICATE A POSSIBLE**  
**FURTHER DOWNGRADE OF APS' CREDIT RATINGS, HAVE BEEN**  
**OVERLOOKED BY STAFF'S WITNESSES IN THEIR TESTIMONY?**

1 A. Attached hereto as **Attachment DEB-22** are recent comments of various  
2 investment houses and financial analysts who cover APS and whose comments  
3 tend to influence a company's credit standing. These recent statements include:

- 4 1. **Lehman Brothers**, Equity Research (Jan. 25, 2006): "... APS's  
5 credit metrics remain in junk territory barring passage of the  
6 interim rate filing. . . . We still view AZ as a tough regulatory  
7 environment."
- 8 2. **Bank of America**, Debt Research (Jan. 25, 2006): "We believe  
9 that despite all the political posturing, the ACC understands that it  
10 must do what it can to protect the investment grade rating of APS.  
11 The cost of a downgrade to junk would be astronomical for  
12 customers because APS has to fund a very large CAPEX program  
13 to support growth in the state."
- 14 3. **Bank of America**, Debt Research (Jan. 26, 2006): "Fitch  
15 believes, as do we, that the result of yesterday's meeting [at the  
16 ACC] and the surcharge, when it is implemented, will not address  
17 the rapidly building deferral balances for fuel and purchased  
18 power at APS. . . . If APS is unsuccessful in obtaining additional  
19 cash through interim relief, we are very concerned that S&P and  
20 the other agencies will take further action."
- 21 4. **Regulatory Research Associates** (Jan. 27, 2006): "A major  
22 concern is the fact that mounting cash flow deferrals led Standard  
23 & Poor's (S&P) to downgrade PNW/APS corporate credit ratings  
24 on December 21, 2005, to one step above junk status, and a further  
25 downgrade would significantly increase the company's borrowing  
26 costs going forward. The regulatory process at the ACC continues  
to be tedious and laborious. . . . This regulatory lag is a source of  
deteriorating cash flow, and resulted in the December 2005 credit  
quality downgrade by S&P that leaves PNW/APS one step above  
junk status."
5. **Citigroup**, Equity Research (Feb. 2, 2006): "Key value driver  
remains whether PNW receives constructive treatment in pending  
regulatory matters in front of the ACC. . . . If the ACC continues  
to assume equity holders will finance in perpetuity the legitimate  
costs incurred to deliver service to Arizona ratepayers, the

1 situation could lead to a further credit downgrade, cause bond  
2 spreads to widen, trigger collateral calls, and materially impair the  
3 company's ability to access the equity capital markets at favorable  
4 terms."

5 6. **Lehman Brothers**, Equity Research (Feb. 2, 2006): "In our  
6 current view we see a difficult path to approval of the emergency  
7 rate filing as the commission is much more likely to just consider  
8 the GRC filing in a full review. This will leave PNW in a cash  
9 tight position for the remainder of the year and puts them at risk  
10 for further credit downgrades to below the investment grade  
11 level."

12 7. **Bank of America**, Equity Research (Feb. 3, 2006): "The credit  
13 ratings of the parent and utility have come under pressure of late. .  
14 . . . The primary driver in all of these moves [rating actions] is the  
15 uncertainty around timely recovery of deferred fuel and purchased  
16 power costs."

17 **Q. STAFF WITNESS WOOLRIDGE REFERENCES TWO RECENT**  
18 **REPORTS ON PINNACLE WEST: A VALUE LINE INVESTMENT**  
19 **SURVEY REPORT DATED FEBRUARY 10, 2006 AND A STANDARD &**  
20 **POOR'S STOCK REPORT DATED FEBRUARY 18, 2006. ARE YOU**  
21 **FAMILIAR WITH THESE REPORTS? PLEASE DESCRIBE THE**  
22 **SERVICES THAT CREATE THESE REPORTS.**

23 **A.** Yes, I am. Both Value Line's Investment Survey and Standard & Poor's Equity  
24 Research produce short reports on individual stocks to facilitate investment  
25 research by investors. Value Line evaluates approximately 1,700 individual  
26 stocks.<sup>6</sup> Each Value Line ranking is relative to all of the other stocks in Value  
Line's coverage universe, regardless of industry. Standard & Poor's Equity  
Research rates approximately 1,500 U.S. stocks.<sup>7</sup>

**Q. HOW DO STOCK RATING SERVICES DIFFER FROM CREDIT**  
**RATING SERVICES? SPECIFICALLY, HOW DO VALUE LINE AND**

<sup>6</sup> *How To Invest in Common Stocks: The Guide To Using The Value Line Investment Survey*, Value Line Publishing, c. 2005, p. 1.

<sup>7</sup> *Standard & Poor's Stock Appreciation Ranking System (STARS): Methodology, Analysis & Performance Attribution*, June 2005, Standard & Poor's Corporation, c. 2005, p. 9.

1           **STANDARD & POOR'S EQUITY RESEARCH DIFFER FROM CREDIT**  
2           **RATING SERVICES?**

- 3           A.     Stock rating services attempt to project the expected performance of common  
4                 stocks. In other words, they provide investment advice. While the ratings of  
5                 both Value Line and Standard & Poor's Equity Research relate to expected stock  
6                 price performance over periods of up to twelve months, credit rating agencies  
7                 evaluate the ability of the debt issuer to repay its debts over time as they mature,  
8                 which may be short-term or long-term (up to 30 years) timeframes. <sup>8</sup>

9                 Stock rating services tend to focus on trends for earnings and dividends and do  
10                not place significant emphasis on cash flow, while credit rating agencies focus  
11                primarily on cash flow.

- 12          Q.     **MR. WOOLRIDGE NOTES THAT VALUE LINE WRITES: "THOSE OF**  
13                 **A CONSERVATIVE BENT MIGHT ALSO NOTE PNW'S STRONG**  
14                 **FINANCES." PLEASE COMMENT.**

- 15          A.     References to Pinnacle West by Value Line are always relative to the other  
16                 companies Value Line covers. Value Line's "cash flow" calculations do not take  
17                 into account the substantial non-cash income in the form of PSA deferrals that, if  
18                 appropriately reflected, would significantly reduce the apparent strength of  
19                 Pinnacle West's finances.

- 20          Q.     **MR. WOOLRIDGE STATES THAT PINNACLE WEST'S QUALITY**  
21                 **RANKING OF "A-" IS THE HIGHEST AMONG THE PEER GROUP IN**  
22                 **THE REFERENCED S&P STOCK REPORT. THE QUALITY**  
23                 **RANKINGS FOR THE COMPANIES IN THE PEER GROUP**  
24                 **IDENTIFIED IN THE REPORT BY S&P WERE B OR B+. PLEASE**  
25                 **DISCUSS THE DIFFERENCES.**

26                 

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                  <sup>8</sup>     Standard & Poor's Ratings Services Code of Conduct, October 2005, pp. 1-2.

1 A. The identified peer group includes certain mid-sized U.S. electric companies.  
2 The footnote to the peer group table indicates that peer groups may be  
3 determined based on market capitalization.

4 According to Standard & Poor's, in 2004 companies ranked B or higher  
5 comprised almost 46% of the U.S. stocks.<sup>9</sup> Therefore, Pinnacle West and all of  
6 the peer group companies rank in the broad top 46% of the U.S. stocks.

7  
8 The following table shows the Quality rankings and dividend growth rates for  
9 the ten years ended December 31, 2005 for the peer companies. Significantly,  
10 Westar Energy, a peer group member with a Quality Ranking of "B", is one of  
11 only four electric utilities in the U.S. whose debt securities are rated non-  
12 investment grade "junk".

<u>Company Name</u>	<u>Quality Ranking</u>	<u>10-Year Dividend Growth<sup>10</sup></u>
Duquesne Light Holdings	B	(2.4)%
Great Plains Energy	B	0.6%
Hawaiian Electric Industries	B+	0.3%
Pepco Holdings	B	(4.9)%
UIL Holdings	B	0.2%
Westar Energy	B	(7.6)%

13  
14  
15  
16  
17  
18  
19 **Q. WHAT ASSURANCES DO WE HAVE THAT APS' CREDIT RATINGS**  
20 **WILL NOT BE DOWNGRADED IF THE EMERGENCY REQUEST IS**  
21 **GRANTED?**

22 A. We cannot completely guarantee that one or more of the rating agencies will not  
23 proceed to downgrade APS' credit ratings notwithstanding the receipt by APS of  
24 emergency rate relief, but the concern of the rating agencies has centered on

25 <sup>9</sup> *Standard & Poor's Quality Rankings*, June 2005, Standard & Poor's Corporation, c. 2005, p. 23.

26 <sup>10</sup> "Electric Utility Dividend Changes: 1996-2005," Utility Focus, Industry Study, Regulatory Research Associates, Inc., January 4, 2006.  
Shown as compound annual growth rates.



1 APS' ability to recover fuel and purchased power costs on a current basis. Thus,  
2 if the Commission grants without delay the emergency rate relief requested by  
3 APS, it seems highly unlikely that the credit rating agencies will have a basis to  
4 further downgrade APS' credit ratings. On the other hand, based on the  
5 comments of the rating agencies in the last 30 to 90 days, the risk of a further  
6 downgrade – to non-investment “junk” grade – seems highly likely should the  
7 Commission not grant emergency rate relief.

8 **Q. IS IT APPROPRIATE TO TARGET WHAT ONE MAY BELIEVE IS THE**  
9 **BARE MINIMUM AMOUNT NECESSARY TO PREVENT FURTHER**  
10 **RATING DOWNGRADES?**

11 **A.** No. Such an approach entails great financial risk. We cannot presume to know  
12 with certainty how the rating agencies will resolve these questions. As we know,  
13 they do not look at the financial metrics exclusively but also consider qualitative  
14 factors. It therefore represents an inappropriate and imprudent risk to aim only  
15 to attain the presumed bare minimum. On the other hand, granting the Company  
16 timely recovery of prudently incurred fuel and purchased power costs would  
17 signal a pattern of a supportive regulatory environment, particularly in light of  
18 the Commission's January decision.

19 **Q. CAN APS GET BY AND STAVE OFF A FURTHER DOWNGRADE OF**  
20 **ITS CREDIT RATINGS WITH LESS THAN THE FULL AMOUNT OF**  
21 **ITS EMERGENCY INTERIM RATE REQUEST AS PHELPS DODGE**  
22 **WITNESS HIGGINS SUGGESTS?**

23 **A.** We do not believe that it is likely that APS can avoid a downgrade without full  
24 relief. First, neither the Staff nor any other party disputes that APS' projected  
25 costs for fuel and purchased power in 2006 are accurate given the assumptions  
26 made (and as Mr. Ewen explains in his rebuttal testimony, the fuel cost estimate  
has been reduced somewhat due to a decrease in natural gas prices in the last

1 month). Second, the credit rating agencies want to know that APS can recover  
2 its increasing fuel and purchased power costs on a **current** basis. Thus, any  
3 deferral of the recovery of those costs sends the wrong message to the rating  
4 agencies and runs the risk that one or more of the agencies will further  
5 downgrade APS. Third, as noted above, such a deferral of even a part of APS'  
6 ongoing costs for fuel and purchased power to serve its growing customer base  
7 may unfairly burden future ratepayers who will have to pay those deferrals and  
8 distorts the true cost of electricity at the present time. Thus, authorizing  
9 recovery of less than the full amount on a current basis does a disservice to the  
10 ratepayers and runs a risk that the ratepayers will be forced to pay added interest  
11 costs of over \$1 billion in the next decade stemming from a downgrade of APS'  
12 credit rating.

13 I have attached as **Attachment DEB-23** a series of graphs that show the impact  
14 of APS' FFO/Debt ratio under various assumptions of interim rate relief ranging  
15 from the status quo to the full amount of rate relief requested by the Company.  
16 These graphs include ones that reflect (1) the impact of the Company's proposed  
17 emergency interim rate increase, (2) the impact of the alternative proposal by  
18 Phelps Dodge witness Higgins of a 7.8%, \$126 million, interim rate increase, (3)  
19 the impact of the alternative proposal made by Staff (as we understand it)  
20 relating to quarterly surcharges starting June 30, 2006, (4), the impact of the  
21 Staff proposal if modified in certain ways that are discussed by APS witness  
22 Steve Wheeler in his rebuttal testimony, (5) the impact of the Higgins proposal  
23 combined with the Wheeler-modified Staff proposal, and (6) a comparison of all  
24 of these different proposals. As is clearly indicated in these graphs, only the  
25  
26

1 interim rate relief requested by the Company gets the Company out of the non-  
2 investment "junk" grade debt ratio range.

3 **Q. WHY CAN'T THIS PROBLEM BE SOLVED BY AN INFUSION OF**  
4 **CASH FROM APS' PARENT, PINNACLE WEST?**

5 A. Over the past year, Pinnacle West Capital Corporation already has invested some  
6 \$460 million into APS. Additional infusion of funds by Pinnacle West into the  
7 Company will not solve what the credit rating agencies see as a crisis in the  
8 imbalance between the Company's cash revenues and its cash expenses. Long-  
9 term revenue relief must come not from a utility's parent company but from the  
10 regulatory agency that oversees its rates and is legally responsible for setting  
11 compensatory revenue levels. The credit rating agencies question whether the  
12 ACC is sufficiently responsive to the Company's revenue requirements in the  
13 face of substantial increases in fuel and purchased power costs over which the  
14 Company has no control.

15 **Q. STAFF WITNESS SMITH HAS INDICATED THAT STAFF SUPPORTS**  
16 **THE CONCEPT THAT ADDRESSING UNDER-COLLECTION OF APS'**  
17 **FUEL AND PURCHASED POWER COSTS AS SOON AS POSSIBLE**  
18 **RATHER THAN LATER IS PREFERABLE (SMITH TESTIMONY P.28)**  
19 **AND THAT AN "ALTERNATIVE" TO APS' EMERGENCY INTERIM**  
20 **RATE REQUEST WOULD BE QUARTERLY FILINGS OF**  
21 **SURCHARGE APPLICATIONS BY APS, TO WHICH STAFF WOULD**  
22 **RESPOND IN 30 DAYS (SMITH TESTIMONY P.31). WILL THIS**  
23 **ALTERNATIVE TO APS' EMERGENCY RATE FILING BE EQUALLY**  
24 **EFFECTIVE IN PREVENTING A FURTHER DOWNGRADE OF APS?**

25 A. No. Staff's alternative proposal would improve upon the status quo, but it  
26 would not fully solve the cash flow problems that concern the rating agencies.  
First, the Staff proposal would have APS file its first surcharge application for  
2006 fuel expenses on June 30, 2006, and subsequent surcharge applications  
would be filed at the end of each calendar quarter thereafter (i.e., September 30  
and December 31). Second, these repeated applications and the associated

1 processing delays would mean that APS would recover in 2006 a much smaller  
2 portion of its fuel and purchased power costs incurred in 2006. To be at all  
3 meaningful, this alternative proposal would need to be modified to make cost  
4 recovery certain and timely. In that regard, Mr. Wheeler has suggested such  
5 modifications. As you can see by the applicable graph in **Attachment DEB-23**,  
6 the Staff proposal, even as modified in the manner addressed in Mr. Wheeler's  
7 testimony, does not get APS out of the "junk" range, although as noted above, it  
8 is clearly better than doing nothing. The Staff proposal, like the "bare  
9 minimum" (7.8%, \$126 million) proposal made by Phelps Dodge witness  
10 Higgins, carries with it significant risks of a further credit downgrade that can  
11 and should be avoided for the good of APS and its customers.

12 Taking the Wheeler-modified Staff proposal and the Higgins proposal together  
13 (i.e., an interim rate increase of 7.8% effective May 1, 2006, coupled with  
14 quarterly surcharges beginning June 30, 2006, to address the balance of  
15 unrecovered costs) might have a chance of sufficiently addressing the concerns  
16 of the rating agencies that have put APS on the brink of a non-investment "junk"  
17 credit ratings for the first time in its history. However, even this combined  
18 alternative to the Company's emergency rate request involves a substantial lag  
19 in recovery of fuel and purchased power costs that may still give the rating  
20 agencies concern about APS' creditworthiness.

21  
22 **Q. IS IT SIGNIFICANT IN YOUR MIND THAT STAFF HAS INDICATED**  
23 **THAT IT SUPPORTS THE CONCEPT OF ADDRESSING APS' UNDER-**  
24 **COLLECTION OF FUEL AND PURCHASED POWER COSTS AS SOON**  
25 **AS POSSIBLE RATHER THAN LATER?**

26 **A.** Yes. Staff witness Smith recommends the quarterly surcharge in an effort to  
deal with "the possibility that APS may face circumstances that could implicate

1 a financial crisis sometime in 2006" (Smith testimony p. 32). APS' looming  
2 financial crisis takes the form of more than \$1 billion in added financing costs  
3 over the next decade if the agencies lower APS' credit ratings to "junk" status.  
4 The extraordinary increase in the cost of fuel and purchased power in the last  
5 eight months is a crisis that affects not just APS and its customers, but also  
6 electric utilities around the country. The rating agencies want to see how this  
7 Commission deals with this crisis in Arizona. As previously stated by APS  
8 management, the fate of APS and its customers for at least the next decade is  
9 dependent on the decisions this Commission makes in the next few weeks on  
10 APS' emergency rate application. Although recognizing the problem, Staff's  
11 recommendations do not adequately address the problem.

12 IV. THE HUGE FINANCIAL CONSEQUENCES TO THE RATEPAYERS OF A  
13 CREDIT RATING DOWNGRADE THAT COULD BE AVOIDED BY  
14 GRANTING THE EMERGENCY.

15 Q. **WHAT IN BROAD TERMS WOULD BE THE FINANCIAL**  
16 **CONSEQUENCES OF A CREDIT RATINGS DOWNGRADE?**

17 A. In simplest terms, should APS' credit ratings fall further, the Company will have  
18 to pay more to borrow money. Every decrease in APS' credit ratings increases  
19 the interest and fee cost to the Company, and to its ratepayers. Those costs  
20 increase dramatically when a company's credit ratings fall to non-investment  
21 "junk" grade level.

22 The downgrading by S&P that occurred on December 21, 2005, has already  
23 increased the Company's financing costs by approximately 10-50 basis points  
24 on new long-term debt (amounting to \$100,000 to \$500,000 in additional  
25 interest costs each year for each \$100 million in borrowing). Higher short-term  
26 debt rates and increased bank facility costs add over another \$1 million per year

1 to the eventual burden on customers. In addition, this downgrade has caused  
2 APS' securities to become less marketable. APS cannot rely on the daily  
3 flexibility of the commercial paper markets. We have no guarantee that APS  
4 will be able to issue commercial paper on any given day. If APS can sell  
5 commercial paper, the maturity may extend from overnight to a maximum of a  
6 couple of weeks. This greatly reduces APS' ability to tier its commercial paper  
7 with different maturities in order to achieve the lowest possible cost.

8 The increased costs that APS is already experiencing as a result of the recent  
9 downgrades will seem small in comparison to the enormous impact of non-  
10 investment grade credit ratings. Staff witnesses Smith and Woolridge both  
11 acknowledge that the downgrading of APS' credit ratings to "junk" status would  
12 not be a "desirable outcome" and would result in increased borrowing costs for  
13 the Company, would impede the Company's access to credit, and would  
14 ultimately increase costs for ratepayers. (See Smith testimony at p. 18-19 and  
15 Woolridge testimony at p. 9.) I agree with their conclusions. APS will need to  
16 raise billions of dollars of new debt over the next ten years. As shown on  
17 **Attachment DEB-24**, the cost to the ratepayers of a further credit downgrade  
18 will total between \$625 million and \$1.2 billion through 2015, depending on  
19 actual interest rate spreads. The dramatic increase in costs would occur on a  
20 number of fronts. Long-term financing necessary to fund essential generation,  
21 environmental control, and transmission and distribution construction programs  
22 would be more costly and less reliable. Cost increases would also occur in the  
23 Company's tax-exempt remarketing program. Access to the commercial paper  
24 markets would be eliminated thereby further increasing costs and reducing  
25  
26

1 financial flexibility. All of these costs would further burden APS, which already  
2 is laboring under the recent downgrade by S&P.

3 **Q. WHAT CAPITAL PROJECTS DOES APS HAVE PLANNED FOR THE**  
4 **NEXT FEW YEARS?**

5 **A.** Our capital expenditure budget ("CAPX") is shown on **Attachment DEB-25**.  
6 This Attachment reflects our program to build necessary transmission and  
7 distribution lines, generation plant improvements, new environmental control  
8 systems and other service facilities. This Attachment lists the amounts budgeted  
9 by year, through 2009. The Attachment also shows the amount of money that  
10 APS must borrow each year to finance the projects. As shown, the company's  
11 CAPX budget for the 2006 is approximately \$650 million. Over the years 2006  
12 through 2009, the CAPX budget is anticipated to total more than \$3 billion.  
13 These projects, along with the company's need to refinance maturing  
14 indebtedness and other capital requirements during the same time period, will  
15 require APS to secure more than \$1 billion from external capital sources, even  
16 assuming the Commission grants its pending rate request in the general rate case  
17 (Docket No. E-01345A-05-0816) is granted in full and on schedule early next  
18 year.

19 **Q. CAN APS REDUCE THE POSSIBLE EFFECTS OF A CREDIT DOWN-**  
20 **RATING BY CUTTING ITS CAPX BUDGET?**

21 **A.** While APS theoretically might reduce its exposure to increased credit costs by  
22 reducing its CAPX, cutting the programs that have been approved in the CAPX  
23 would have serious and costly consequences for the continued reliable delivery  
24 of electric service to APS' customers. As the Commission knows, the growth of  
25 the customer base in APS' service territory has been very rapid, and the  
26 projected growth remains very high. Cutting APS' CAPX budget might reduce

1 some of APS' borrowing needs in the short term, but doing so could seriously  
2 jeopardize the ability of APS to meet growing customer needs and demands in  
3 future years. For example, distribution CAPX to support new customer  
4 construction alone will average \$170 million per year. To assume APS would  
5 refuse to connect new customers due to cuts to the CAPX does not seem  
6 acceptable.

7 V. THE "EQUITIES" OF DEFERRING RECOVERY OF INCREASED COSTS  
8 OF FUEL AND PURCHASED POWER.

9 Q. **WHAT IS YOUR RESPONSE TO THE CONTENTION THAT THE**  
10 **REQUESTED EMERGENCY RATE HIKE WILL HAVE AN**  
11 **IMMEDIATE AND SUBSTANTIAL IMPACT ON THE ELECTRIC**  
12 **BILLS OF APS' CUSTOMERS?**

13 A. Although APS has no wish to see its customers' electric bills rise, we must  
14 remember that neither the Company nor the Commission has any control over  
15 the factors causing the rapid and substantial increase in fuel prices. APS has a  
16 right to recover from ratepayers its prudently incurred fuel costs, so these costs  
17 will have to be paid by the ratepayers sooner or later. Putting off the inclusion  
18 of these costs in the rates that APS currently charges its customers distorts the  
19 true cost of electricity, increases the total amount to be recovered, potentially  
20 shifts some of those true costs from current ratepayers to future ratepayers, and  
21 raises the very real possibility that ratepayers will be saddled with massive  
22 additional interest costs over the next decade if APS' credit ratings suffer a  
23 downgrade as a result of a decision by the Commission to defer recovery of  
24 these costs. In short, customer fairness and regulatory prudence both dictate that  
25 APS should recover these costs on a current basis, as contained in our  
26 emergency interim rate request.

Q. **DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**



1 A. Yes, it does.  
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Arizona Public Service Company  
Financial Indicators with APS' Proposed Interim Increase


	Financial Indicator	2003	2004	2005	Projected 2006
1	Funds from Operations Interest Coverage <sup>/1/</sup> ("Interest Coverage")	4.0	3.0	3.3	4.2
2	Funds from Operations to Debt <sup>/1/</sup> ("FFO/Debt")	20.2%	16.0%	14.8%	20.6%
3	Debt to Capital <sup>/1/</sup>	57.7%	58.7%	50.1%	51.9%
4	Return on Common Equity ("ROE")	8.4%	9.0%	6.8%	8.3%

<sup>/1/</sup> Includes impacts of imputed debt

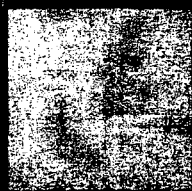
Arizona Public Service Company  
Financial Indicators with Current Rates

	Financial Indicator	2003	2004	2005	Projected 2006
1	Funds from Operations Interest Coverage <sup>/1/</sup> ("Interest Coverage")	4.0	3.0	3.3	3.3
2	Funds from Operations to Debt <sup>/1/</sup> ("FFO/Debt")	20.2%	16.0%	14.8%	15.1%
3	Debt to Capital <sup>/1/</sup>	57.7%	58.7%	50.1%	53.1%
4	Return on Common Equity ("ROE")	8.4%	9.0%	6.8%	7.8%

<sup>/1/</sup> Includes impacts of imputed debt



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Because it involves a look into the future, credit rating is by nature subjective. Moreover, because long-term credit judgments involve so many factors unique to particular industries, issuers, and countries, we believe that any attempt to reduce credit rating to a formulaic methodology would be misleading and would lead to serious mistakes.

That is why Moody's uses a multidisciplinary or "universal" approach to risk analysis, which aims to bring an understanding of *all* relevant risk factors and viewpoints to every rating analysis. We then rely on the judgment of a diverse group of credit risk professionals to weigh those factors in light of a variety of plausible scenarios for the issuer and thus come to a conclusion on what the rating should be. Several analytical principles guide that reasoning process.

#### Some Basic Principles

**Emphasis on the Qualitative:** Quantification is integral to Moody's rating analysis, particularly since it provides an objective and factual starting point for each rating committee's analytical discussion. Those who wish further information on the numerical tools we use may consult our written research on industries and specific issuers.

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However, Moody's ratings are not based on a defined set of financial ratios or rigid computer models. Rather, they are the product of a comprehensive analysis of each individual issue and issuer by experienced, well-informed, impartial credit analysts.

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Because of this, our ratings are not intended to ratchet up and down with business or supply-demand cycles or to reflect last quarter's earnings report. In our view it would be punitive to rate a security conservatively because of poor short-term performance if we believe the issuer will recover and prosper in the long-term.

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**Level and Predictability of Cash Flow:** In every sector, the foundation of Moody's rating approach rests on the answer to one question: What is the level of risk associated with receiving full and timely payment of principal and interest on this specific debt obligation and how does that risk compare with that of all other debt obligations?

When we speak of "risk to timely payment," we are measuring the ability of an issuer to generate cash in the future. Our analysis focuses, therefore, on an assessment of the level and predictability of an issuer's future cash generation in relation to its commitments to repay debtholders.

Our main emphasis throughout the rating analysis is on understanding strategic factors likely to support future cash flow, while identifying critical factors that will inhibit future cash flow. The issuer's capacity to respond favorably to uncertainty is also key. Generally, the greater the predictability of an issuer's cash flow and the larger the cushion supporting anticipated debt payments, the higher the rating will be.

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# RESEARCH

## New York Regulators' Consistency Supports Electric Utility Credit Quality

**Publication date:** 15-Aug-2005

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Regulation defines the environment in which a utility operates and greatly influences a company's financial performance. A utility with a marginal financial profile can, at the same time, be considered highly creditworthy as a result of supportive regulation. Conversely, an unpredictable or antagonistic regulatory environment can undermine the financial position of utilities that are operationally very strong.

To be viewed positively, regulatory treatment should be timely and allow consistent performance over time, given the importance of financial stability as a rating consideration. Also important is the transparency of regulatory policies, and Standard & Poor's Ratings Services' analysis includes evaluating the selection process and membership of a regulatory body, the regulatory framework, and regulatory policies and practices.

The New York Public Service Commission (PSC) regulates investor-owned electric utilities in New York State and has generally supported the creditworthiness of the electric utilities under its jurisdiction (see table 1). The New York regulatory climate has been relatively consistent and transparent over the past several years. The PSC operates with five full-time commissioners that are appointed by the governor and serve six-year staggered terms. From a credit perspective, full time commissioners are preferable to part-time commissioners because they should be able to more fully devote themselves to the regulatory process. Also, appointed commissioners are preferable to elected commissioners because elected commissioners may have strong incentives to bring about rate reductions, particularly during election season. The staggered term of office is a credit positive in that it promotes continuity and stability. The PSC's commissioners generally have industry experience and operate with a staff of about 500 and an adequate annual operating budget of about \$70 million.

Table 1 Investor-Owned Electric Utility Ratings In New York State	
Company	Rating
Central Hudson Gas & Electric Corp.	A/Stable/--
Consolidated Edison Co. of New York Inc.	A/Stable/A-1
Orange and Rockland Utilities Inc.	A/Stable/A-1
Niagara Mohawk Power Corp.	A/Stable/--
New York State Electric & Gas Corp.	BBB+/Stable/A-2
Rochester Gas & Electric Corp.	BBB+/Stable/--

## Credit Support

The PSC has supported ratings stability by encouraging parties to rate cases to reach multiyear collaborative settlements that include earnings sharing above a return on equity (ROE) benchmark. Multiyear settlements are preferable from a credit perspective because they reduce the volatility that could result from annual rate filings. In the absence of a rate settlement, the PSC has authorized ROEs that are relatively low compared with national averages. For example, the 2003 Rochester Gas & Electric Corp. rate case was the first fully litigated rate case decided by the PSC in seven years, with the PSC authorizing a 9.96% ROE. In traditional rate cases, the PSC must decide within 11 months of the company's initial filing, which is about the average compared with other U.S. regulatory jurisdictions.

The PSC has a long history of adopting multifaceted incentive plans for utilities. Most of the utilities operate under regulatory plans that include earnings sharing provisions. Mechanisms that mandate earnings sharing between shareholders and ratepayers compensate well-run utilities with a share of the profits when companies earn more than their allowed ROE. This acts as an incentive mechanism for management to achieve efficient operations.

The PSC helped to reduce operating risk at the utilities by encouraging, but not requiring, the sale of generation assets and approving company-specific implementation plans in 1997 and 1998. As a result, New York electric utilities own minimal power generation plants, which improved their business profile from a credit standpoint. Although the utilities still have to procure power for many of their customers, the operating risks associated with running the power plants has been transferred to the generating plants' new owners. Also, the PSC helped encourage the divestiture of the plants because it did not adopt a generic policy regarding stranded investment, but took the time needed to review company-specific plans.

The PSC has also supported credit by allowing electric utilities to pass-through unpredictable energy costs to customers via a fuel adjustment clause. When the utilities restructured and sold most or all of their generation assets, the fuel-adjustment clause was transitioned into a market power adjustment clause (MAC) or a commodity adjustment clause (CAC). The MAC/CAC only applies to customers that have not selected an alternative power supplier and who have not selected a fixed-price power option. For the most part, adjustments are made monthly, which greatly insulates the utilities from volatile cash flows due to changes in market prices. In addition, the PSC has a strong record of not penalizing the utilities with onerous hindsight prudence reviews on their power purchases.

## Recent Rate Agreements

The recent rate agreements illustrate that although the PSC has lowered and raised rates for New York utilities, depending on circumstances, the result is a stable, transparent, and fairly predictable regulatory environment that supports credit. (See table 2.)

Table 2 Rate Agreements Sharing Thresholds For Return On Equity						
	First ROE		Second ROE		Third ROE	
	Cap (%)	Sharing	Cap (%)	Sharing	Cap (%)	Sharing
Consolidated Edison Co. of New York Inc. Con Edison	11.40	50/50	13.00	25/75	N/A	N/A
Orange and Rockland Utilities Inc.	12.75	50/50	N/A	N/A	N/A	N/A
New York State Electric & Gas Corp.*	12.50	50/50	N/A	N/A	N/A	N/A
Rochester Gas & Electric Corp.¶	12.25	50/50	N/A	N/A	N/A	N/A
Niagara Mohawk Power Corp.§	11.75	50/50	14.00	25/75	16.00	90/10
Central Hudson Gas & Electric Corp.	10.50	70/30	11.30	65/35	14.00	0/100



\*ROE can be 300 basis points higher for supply earnings at NYSEG. †ROE can be 25 basis points higher if customer-migration targets are met. §ROE can be 25 basis points higher if outreach and education goals are met. N/A—Not applicable.

### Consolidated Edison Co. of New York Inc. (Con Edison)

Con Edison is investing heavily in its electric infrastructure to meet the growing needs of residents and businesses and to support future regional economic growth. About \$1 billion per year will be invested in electric transmission and distribution (T&D) over the next five years. Electricity demand has increased steadily as New York's population grows and enhanced technology enables the use of new electronic devices.

Although Con Edison's latest rate agreement was slightly less favorable than expected, it supports the existing rating on the company. On March 16, 2005, the PSC approved a three-year electric rate plan for Con Edison, which came into effect on April 1, 2005 and will run through March 31, 2008. The company increased its electric delivery service rates by \$104.6 million (1.3%) effective April 1, 2005, and they will increase by an additional \$220.4 million effective April 1, 2007. The rate hikes reflect the amortization of regulatory assets and liabilities that are being used to mitigate the rate increases. Absent these amortizations, the rate hikes would be \$232 million in the first year, \$232 million in the second, and \$410 million in the third. In addition, the plan will allow Con Edison to retain the first \$60 million of proceeds from the auction of transmission congestion contracts in each of the three years.

The rate plan does not authorize a specific rate of return. However, Con Edison may retain 50% of earnings between an 11.4% and 13% ROE, and 25% of earnings in excess of a 13% ROE, based on the company's actual capital structure, subject to a maximum equity ratio of 50%. The plan specifies rate bases of \$9.3 billion in the first year, \$9.6 billion in the second, and \$10.3 billion in the third. The company will be permitted an annual reconciliation of actual T&D net plant, pension, and other post-employment benefit expenses, lower Manhattan restoration costs, and property taxes. The revenue requirement impact of any difference will be deferred as a regulatory asset or liability, subject to certain limitations—if Con Edison's earnings fall within an ROE range of 11.4% to 13%, 50% of the reconcilable amounts could be deferred and, if earnings exceed a 13% ROE, deferrals would not be permitted. The annual reconciliations of T&D net plant and lower Manhattan restoration costs are recoverable in full and not subject to the possible limitation described above.

### Orange and Rockland Utilities Inc.

In 1999, the PSC approved the merger of Consolidated Edison Inc. and Orange and Rockland and the companies agreed to rate reductions that passed on 75% of the merger savings to customers. More recently, in October 2003, the PSC approved the current electric agreement, which covers the period from July 2003 through October 2006, provides for no changes to electric base rates, and contains provisions for the amortization and offset of regulatory assets and liabilities. The net effect of the agreement will be to reduce electric operating income by a total of \$11 million (pretax) over the period covered by the agreement. The agreement continues to provide for recovery of energy costs from customers on a current basis and for Orange and Rockland to share equally with customers earnings in excess of a 12.75% return on common equity during the three-year period from July 2003 through June 2006. July 2006 through October 2006 will not be subject to earnings sharing.

### Rochester Gas & Electric Co. (RG&E)

On May 20, 2004, the PSC approved the rate agreement for RG&E's electric and natural gas rates through 2008. Key features of the electric rate agreement include:

- Electric delivery rates are frozen through December 2008, except for the implementation of a retail access surcharge effective May 1, 2004, that will recover \$7 million annually.
- RG&E can recover its actual electricity supply costs during the period May 1, 2004 through Dec. 31, 2004.

- RG&E will refund to customers \$110 million of the \$454 million net cash proceeds from the sale of the Ginna plant.
- Customers and stockholders will share equally in earnings above a 12.25% ROE target through an earnings-sharing mechanism.

The 2004 electric and natural gas rate agreements resolved all outstanding issues related to RG&E's requests filed with the PSC in 2003. Those issues included:

- The deferral and recovery of costs, including interest for restoration work resulting from a severe ice storm in April 2003.
- Recovery of replacement power-purchased costs incurred in 2003 in connection with a scheduled refueling outage for the Ginna plant.
- The deferral and true-up of estimated pension costs for the 16-month period through May 1, 2004.

On June 10, 2004, after receiving all regulatory approvals, RG&E sold Ginna to Constellation Energy Inc. The transaction generated \$454 million in cash. RG&E's electric rate agreement resolves the regulatory and ratemaking aspects related to the sale of Ginna and addresses the disposition of the asset sale gain. The agreement provides for an Asset Sale Gain Account (ASGA) of about \$380 million. RG&E estimates that \$145 million will remain in the ASGA at the end of 2008. At that time, the ASGA may be used at the PSC's discretion for rate moderation, among other things.

Beginning Jan. 1, 2005, customers could annually choose to purchase commodity service from RG&E at a fixed price or at a price that varies monthly based on the electricity market price. Alternatively, customers may continue to choose to purchase their commodity service from an energy service company. Customers enrolled in these new commodity options between Oct. 1, 2004, and Dec. 31, 2004. About 25% of RG&E's load is now served under the fixed-price option. Customers who did not make a choice are served under RG&E's variable-price option. A 35% adder is applied to the average one-year forward strip price during the month of September before the election period, to determine the fixed-price offering. Owned electric generation and long-term supply contracts significantly reduce RG&E's exposure to market fluctuations for procurement of its electric supply.

#### **New York State Electric & Gas Co. (NYSEG)**

The key near-term regulatory issue will be NYSEG's planned multiyear rating filing expected not later than early 2006, which, once finalized, would become effective Jan. 1, 2007. NYSEG's existing five-year electric rate plan extends through Dec. 31, 2006. The PSC's February 2002 order reduced annualized electric rates by \$205 million for NYSEG customers effective March 1, 2002, which amounted to an overall average reduction of 13% for most customers. The 2002 order also required equal sharing of earnings between NYSEG customers and shareholders of ROEs in excess of 12.5% on electric delivery, or 15.5% on the total electric business (including supply) for each of the years 2003 through 2006. NYSEG customers have a biannual opportunity to choose a NYSEG fixed-price option a variable price option or to purchase supply from an energy services company. The NYSEG fixed-price option is the default and accounts for about 60% of NYSEG's load. A 35% adder is applied to the average two-year forward price during the September before the election period, to determine the fixed-price offering. NYSEG actively hedges the load required to serve customers who select the fixed-rate option. For purposes of earnings sharing, NYSEG is required to use the lower of its actual equity or a 45% equity ratio. Historically, earnings levels have exceeded 15.5% and were sufficient to generate estimated sharing with customers of \$17 million in 2004 and \$7 million in 2003.

#### **Niagara Mohawk Power Co.**

The 10-year regulatory agreement reached as part of the 2001 approval of the merger with National Grid USA

permits recovery of and a return on Niagara Mohawk's regulatory assets over 10 years with a 10.6% rate of return, with larger amounts recovered in later years. The allowed ROE before any sharing occurs is 11.75%. After 12%, earnings are shared 50/50 with customers. The company agreed to net customer savings of about \$1 billion over 10 years, including a reduction of \$160 million in delivery rates (about 8%), which remain fixed until 2012, subject to limited adjustments for changes in regulatory requirements and other unforeseen and difficult to forecast items. In addition, Niagara Mohawk absorbed the loss of certain stranded costs relating to nuclear plants (about \$850 million), while recovering stranded costs relating to its numerous purchased-power contracts. The agreement also provided price stabilized commodity service for residential and commercial customers and the extension by 16 months of the existing multiyear gas settlement, which ensured stable distribution rates through December 2004. Niagara Mohawk is responsible for procuring power supplies on behalf of its customers as part of their provider of last resort obligation, although most large customers receive a day-ahead New York Independent System Operator market price. Niagara Mohawk's portfolio of legacy power-purchase contracts from earlier mandated state and federal programs and from generation asset sales is used to serve residential and small commercial customers. Many of these agreements gradually roll off through 2011. Variations in nonhedged commodity costs flow through a CAC.

### Central Hudson Gas & Electric Corp.

On June 14, 2004, the PSC adopted the terms of the 2004 joint proposal, which became effective July 1, 2004, and includes:

- Continuation of the rate levels, rate designs, and related accounting provisions (including deferrals) previously established by the PSC in July 2001;
- An additional \$5 million refund from the customer benefit fund for certain classes of electric customers;
- Continued funding from the customer benefit fund for other purposes such as economic development and retail access rate credits previously approved by the PSC;
- Recovery, subject to specified limitations, of deferred pension and other post-employment benefit costs from the customer benefit fund;
- A lowering of the threshold for sharing of earnings with customers (from an 11.3% to a 10.5% ROE);
- Modified earnings sharing so that earnings above 10.5% ROE and up to 11.3% will be shared 70%/30% between Central Hudson and ratepayers;
- Earnings above 11.3% ROE and up to 14% shared 65%/35% between Central Hudson and customers. Earnings above 14% ROE will be added to the customer benefit fund.

Central Hudson is in the extension period of its current rate agreement and filed for increased rates on July 29, 2005.

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# RESEARCH

## Industry Report Card: U.S. Electric/Water/Gas

Current Ratings >>

**Publication date:**

06-Jul-2005

**Primary Credit Analyst:**

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### Commentary/Key Trends

Standard & Poor's Ratings Services expects rating activity in the regulated U.S. utility (electric, gas, pipeline, and water) and merchant power sectors to continue to be relatively modest through at least the remainder of the year.

Regulatory rulings have once again become a dominant factor in companies' credit quality. These decisions will be critical for utilities in many states that are nearing the end of multiyear transition periods and for those that will be making significant capital investment in infrastructure. Efforts to reward shareholders through share repurchases or dividend increases are also a development that weighs on credit quality. These actions are especially significant for companies whose financial profiles are already somewhat weak for their ratings, leaving them susceptible to negative rating actions.

Credit outlooks, which are a leading indicator of rating trends, show that there are nearly twice as many stable outlooks as negative outlooks. Only about 11% of outlooks are positive. Therefore, there should be more rating stability over the near to intermediate term, with somewhat of a negative bias in rating actions.

Since the last report card (see "Industry Report Card: U.S. Electric/Water/Gas" published on RatingsDirect May 3, 2005), four families of companies were upgraded (representing 13 individual ratings) and six families of companies were downgraded (representing 15 individual ratings). Rating actions have been largely due to various factors, most prominently changing financial profiles, both improving (Allegheny Energy Inc.) and weakening (Northeast Utilities), and negative regulatory actions or uncertainty (Central Vermont Public Service Corp., Middlesex Water Co.).

Rate filings and rulings on rate proceedings in Florida, Hawaii, Illinois, Kansas, Maryland, Massachusetts, Missouri, and Wisconsin could have rating implications in the near future. Factors that are driving the need for regulatory approval include the considerable capital expenditures required by many utilities to satisfy environmental requirements, construction of new generation facilities, and efforts to pass through or recover unanticipated costs. Developments in FERC policy, particularly regarding transmission and market power, bear watching. The opposing views of certain state regulatory bodies and the FERC on issues, such as restructuring the regional transmission systems and incorporating certain merchant plants of affiliated companies in the rate base, add to the importance of the regulatory treatment for the industry.

Despite meaningful improvement in financial measures over the past few years, many companies have negative outlooks because of weak credit metrics. This weakness results primarily from high debt levels and cash flow stress associated with unsuccessful forays into more competitive businesses. Moreover, despite the current industry trend of getting "back to basics," Standard & Poor's remains vigilant to, and skeptical of, nonregulated business pursuits.

outside of the core competencies of utility management. Inevitably, competition for capital and investor interest will embolden companies to embrace growth strategies that could erode credit quality.

Credit trends in the merchant energy segment of the electric power industry have not changed very much over the past six months, although there have been a few rating upgrades and positive outlook revisions. Most of the credit improvement has come from successful refinancings and completion of strategic asset sales and not from improved industry fundamentals. Utilities with merchant exposure continue to experience volatile cash flows and regulatory uncertainty.

The operating environment for the merchant energy sector remains challenging. Faced with the prospect of stagnant power markets in many regions, cash flow measures are likely to remain weak until wholesale electricity margins materially improve. Since electric industry deregulation has come to a halt, market opportunities in merchant generation are few, although existing assets continue to change ownership, particularly as private equity becomes a larger player.

## Issuer Review

Table 1 U.S. Electric/Gas/Water			
Issuer	Corporate credit rating*	Analyst	Comment
The AES Corp.	B+/Positive/--	Taylor	Standard & Poor's expects AES to continue on its path of parent level debt reduction and, if Standard & Poor's becomes comfortable that AES can meet its goal of lowering parent level debt to about \$4.5 billion by early next year, an upgrade to 'BB-' is likely. Fairly sizable distributions from developing economies such as Venezuela, Nigeria, and Argentina, in 2004 were helpful, but expectations of continuing dividends from these economies present risk. Standard & Poor's expects continued equity investment in new projects, especially in the wind sector.
Indianapolis Power & Light Co.	BB+/Positive/--	Eiseman	See The AES Corp.
IPALCO Enterprises Inc.	BB+/Positive/--	Eiseman	See The AES Corp.
AGL Resources Inc.	A-/Negative/A-2	Messer	On June 10, 2005, Atlanta Gas Light Co. reached a rate settlement with the Georgia Public Service Commission that Standard & Poor's considers neutral for credit quality. Standard & Poor's views positively the roughly \$30 million annual increase in discretionary cash flow through 2008 expected to result from the extension of AGL's pipeline-replacement program, as well as the commission's decision to only modestly decrease Atlanta Gas Light's allowed ROE to 10.9% from 11%. On the other hand, Standard & Poor's views the five-year rate freeze and the elimination of

			performance-based ratemaking as potentially pressuring operating margins through 2010.
Atlanta Gas Light Co.	A-/Negative/--	Messer	See AGL Resources.
Pivotal Utility Holdings	A-/Negative/--	Messer	See AGL Resources.
Allegheny Energy Inc.	BB-/Positive/--	Hsieh	Allegheny continues to make progress bolstering its balance sheet. It has so far paid down more than 1.2 billion of debt, compared with the stated goal of paying down \$1.5 billion of debt by the end of 2005. Allegheny is likely to receive \$141 million in cash for the sales of its West Virginia gas operation in the third quarter of 2005. The recent bank loan refinancing efforts at the parent company and Allegheny Energy Supply bode well for the company's recovery effort as they improve liquidity and lower interest expense.
Allegheny Energy Supply Co. LLC	BB-/Positive/--	Hsieh	See Allegheny Energy Inc.
Monongahela Power Co.	BB-/Positive/--	Hsieh	See Allegheny Energy Inc.
Potomac Edison Co.	BB-/Positive/--	Hsieh	See Allegheny Energy Inc.
West Penn Power Co.	BB-/Positive/--	Hsieh	See Allegheny Energy Inc.
ALLETE Inc.	BBB+/Stable/A-2	Messer	Standard & Poor's expects ALLETE's cash flow to be significantly less robust in 2005 due to a one-time \$73 million pretax cash buyout of the LSP-Kendall power-purchase agreement in April 2005. The buyout payments were financed with cash proceeds from the sale of noncore businesses in 2004. Although ALLETE expects about \$26 million of the pretax cash payment to be refunded in 2006 as a capital-loss carry-back payment, the timing of the tax rebate will weaken cash-based financial metrics to below investment-grade levels in 2005. After normalizing the timing of the tax rebate into 2005, Standard & Poor's forecasts that ALLETE will maintain financial metrics consistent with a 'BBB+' rating and likely achieve interest coverage ratios of about 3.8x and funds from operations to total debt ratios of about 20%. In general, Standard & Poor's views ALLETE's buyout of the Kendall agreement favorably.
Alliant Energy Corp.	BBB+/Negative/A-2	Silva	High levels of debt at Alliant Energy Resources, underperforming international assets, and negative discretionary cash flow at the consolidated level remain key factors contributing to the company's negative outlook. Despite some recent debt reduction at Alliant Energy Resources—the company will have retired roughly \$204 million by the end of July 2005—the subsidiary continues to account for about 43% of total gross debt outstanding. Nonregulated investments—most notably in Brazil and China—continue to underperform. However, the company is currently exploring alternatives for its China investments, including the potential merger or sale of the business. An exit from China and other international ventures such as the Laguna del Mar resort in Mexico would improve the company's business risk profile. Internally generated funds are generally sufficient to cover the company's common dividend and utility-related maintenance capital expenditures. However, the company must rely on modest unrestricted cash reserves, currently \$165 million, and external funds for all other uses, including growth-related capital expenditures and the reversal of certain tax-related regulatory liabilities.
Alliant Energy Resources Inc.	BBB+/Negative/A-2	Silva	See Alliant Energy Corp.
Interstate Power & Light Co.	BBB+/Negative/A-2	Silva	See Alliant Energy Corp.
Wisconsin Power & Light Co.	A-/Negative/A-2	Silva	See Alliant Energy Corp.
Ameren Corp.	A-/Negative/A-2	Eiseman	Ameren's ratings could stabilize if a reasonable post-2006 regulatory and market structure environment in Illinois is established, the company successfully integrates Illinois Power into the Ameren system, Callaway's performance improves, and management continues to follow through with actions that support credit quality. Ameren prefunded 55%

			of its 2004 acquisition of Illinois Power with common equity, using about \$800 million of the \$1.3 billion equity issuance to reduce Illinois Power's heavy debt burden. Regulatory uncertainty following rate freezes in Illinois and Missouri on Dec. 31, 2006 and June 30, 2006, respectively, as well as the Callaway nuclear station's declining operating performance, are credit concerns. It appears likely that distribution companies would procure power through an auction process. A regulatory ruling is expected by the end of 2005. Ameren's largest subsidiary, Union Electric, will file a cost of service study with Missouri regulators by Jan. 1, 2006.
AmerenEnergy Generating Co.	A-/Negative/A-2	Eiseman	See Ameren Corp.
Central Illinois Light Co.	A-/Negative/A-2	Eiseman	See Ameren Corp.
Central Illinois Public Service Co.	A-/Negative/A-2	Eiseman	See Ameren Corp.
CILCORP Inc.	A-/Negative/A-2	Eiseman	See Ameren Corp.
Illinois Power Co.	A-/Negative/--	Eiseman	See Ameren Corp.
Union Electric Co.	A-/Negative/A-2	Eiseman	See Ameren Corp.
American Electric Power Co. Inc. (AEP)	BBB/Stable/A-2	Shipman	AEP has experienced electric industry restructuring in its two main utility jurisdictions, Ohio and Texas, but other industry developments have led the company to exit unregulated operations. Regulated entities include the electric distribution and transmission companies in states that have deregulated and the vertically integrated utilities in the other states. Two issues could affect credit quality, but not in the near term. First, the company is faced with an almost constant cycle of regulatory proceedings in one or more of the 11 states in which it operates, as well as at the federal level. Managing such a diverse collection of regulators and the risk it carries is a challenge, even for an organization as large and deep as AEP. Second, the mostly coal-based company will be spending a lot on environmental compliance for the foreseeable future, which will be a massive undertaking that heightens operating risk and regulatory risk, as well as threatening AEP's generation cost advantage.
AEP Texas Central Co.	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
AEP Texas North Co.	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
Appalachian Power Co.	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
Columbus Southern Power Co.	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
Indiana Michigan Power Co.	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
Kentucky Power Co.	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
Ohio Power Co.	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
Public Service Co. of Oklahoma	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
Southwestern Electric Power Co.	BBB/Stable/--	Shipman	See American Electric Power Co. Inc.
American States Water Co.	A-/Negative/--	Carrillo	The credit quality of American States Water reflects that of its main subsidiary, Southern California Water Co., whose financial measures have improved during the last two years to within benchmark levels as the result of much needed, but delayed, rate relief. The responsiveness of state regulators in granting timely rate increases will be key to maintaining credit quality.
Southern California Water Co.	A-/Negative/--	Carrillo	See American States Water Co.
American Transmission Co.	A/Stable/A-1	Jepsen	The financial measures for American Transmission continue to remain strong for the rating due to reliable operations and supportive FERC regulation, including a return on construction work in progress and a 12.2% currently authorized ROE, both of which should further strengthen credit quality. As the company continues its extensive building program over the next 10 years, it faces the

			challenge of managing its transmission construction costs. However, it is expected that the company's capital expenditures will not weaken its financial measures as long as American Transmission's utility owners continue to support credit quality through equity contributions. If the owners curtail equity funding and debt leverage materially increases, credit quality could be affected.
American Water Capital Corp.	A/Negative/--	Beicke	The ratings on American Water Capital, a wholly owned subsidiary of American Water, largely reflect the consolidated credit quality of its ultimate parent, German multi-utility RWE AG.
Aqua Pennsylvania Inc.	A+/Stable/--	Beicke	Parent Aqua America continues to be a leader in the consolidation of smaller water systems, having completed several "tuck-in" acquisitions year to date throughout the company's service territory, including in Pennsylvania. The company is expected to continue acquiring smaller water systems to help maintain its above-average growth rate. Consolidated financial performance remains strong, with adjusted funds from operations (FFO) to average total debt at 18.8% and adjusted FFO interest coverage at 4.4x for the 12 months ended March 31, 2005.
Aquarion Co.	A/Stable/--	Lee	The ratings on Aquarion incorporate the consolidated credit profile of British parent, Kelda Group PLC, as well as Aquarion's weak regulatory environment in Connecticut. On May 25, 2005, Standard & Poor's affirmed its ratings on Kelda following Kelda's announcement of its intention to buy back £120 million (\$219.4 million) of its shares (about 5% of total equity) over the next two years. Standard & Poor's expects the group to maintain an adequate credit profile, although credit metrics should be weaker during the buyback period. Aquarion's credit quality benefits from an attractive service territory, a largely residential customer base, and some geographic diversity, somewhat moderated by weak regulatory treatment in Connecticut.
Aquarion Water Co. of Connecticut	A/Stable/--	Lee	See Aquarion Co.
Aquila Inc.	B-/Negative/--	Silva	Aquila replaced a \$100 million cash-collateralized facility with a \$180 million synthetically secured facility. The new credit facility will free cash that currently supports outstanding letters of credits or is deposited with trade counterparties. In addition, it decided to make a premium offer for the exchange of its \$345 million 6.75% premium income equity securities (PIES) two years prior to the mandatory conversion date. Early conversion to common stock of all outstanding PIES would contribute to modest reductions in debt (14%) and cash interest expense (10%). The exact percentage of holders willing to convert to common stock prior to the mandatory conversion date (Sept. 15, 2007) will not be known until July 1, 2005. Despite the improvement in liquidity, the adequacy of consolidated cash flows remains uncertain, especially in light of the company's onerous debt burden. Improvement in cash flow adequacy depends on the company's ability to execute on its plans to sell certain regulated assets to pay down debt, secure timely base rate increases in a variety of regulatory jurisdictions, avoid an adverse outcome in the South Harper facility court case, and manage utility-related cost pressures arising from interruptions in its contracted coal supply.
Atmos Energy Corp.	BBB/Stable/A-2	Wolinsky	Due to weak credit measures, Standard & Poor's is unlikely to raise its ratings on the company in the near term. Standard & Poor's could lower its ratings if expected free cash flow from the combined company is insufficient to significantly reduce debt or management experiences significant operational difficulties that cause credit measures to deteriorate.
Avista Corp.	BB+/Stable/--	Venkataraman	The first quarter loss at subsidiary Avista Energy reflects the potential volatility in trading business results, but the magnitude is not significant enough to materially affect



			Avista's financial profile. Standard & Poor's always zeroes out margins and cash flows from speculative trading and adds about \$40 million in off-balance-sheet debt to reflect Avista Energy's capital adequacy requirement. Standard & Poor's expects that Avista will continue to pay down debt and avoid further capital investments in unregulated businesses. However, vulnerability to poor hydro years and the volatility in the energy trading operations may continue to hamper Avista's ability to improve its financial profile and eventually achieve investment-grade ratings.
The Baton Rouge Water Works Co.	AA/Stable/--	Beicke	Baton Rouge Water Works continues to maintain strong cash flows, a moderate capital spending program, and conservative financial management. The company also benefits from an above-average organic customer growth rate of 3%. Financial performance remains robust, as evident by the company's healthy free operating cash flow and its adjusted funds from operations to average total debt ratio of 33% for the 12 months ended March 31, 2005.
Black Hills Corp.	BBB-/Negative/--	Silva	Operational difficulties at the company's exploration and production segment have weighed on the rating. First quarter 2005 oil and gas production was essentially flat with fourth quarter 2004. Improved performance in this segment could stabilize the ratings outlook. The sale of the company's telecommunications subsidiary, FiberCom, modestly reduces business risk. The divestiture also provides the company with another opportunity to reduce debt, which would bode well for credit. Pretax cash proceeds from the sale are estimated at \$103 million. The company's new five-year credit facility for \$400 million (\$50 million more than two previous facilities) enhances the company's liquidity modestly.
Black Hills Power Inc.	BBB-/Negative/--	Silva	See Black Hills Corp.
Boardwalk Pipeline LLC	BBB/Stable/--	Wolinsky	Standard & Poor's expects the consolidated funds from operations (FFO) interest coverage ratios to remain above 4x, with an average of about 4.3x. FFO to total debt should remain above 17%, with an average of just under 18%. Debt to total capitalization is expected to remain around 50%.
Gulf South Pipeline Co. LP	BBB+/Stable/--	Wolinsky	See Boardwalk Pipeline LLC
Texas Gas Transmission LLC	BBB+/Stable/--	Wolinsky	See Boardwalk Pipeline LLC
California Water Service Co.	A+/Stable/--	Carrillo	Rating stability is supported by the company's improved financial performance, driven largely by more timely rate relief granted to main subsidiary California Water Service Co. by the California Public Utility Commission. Since its delayed resolution of the 2001 general rate case, the commission has approved a series of significant rate increases and implemented a number of enhancements to the rate filing process, including the use of interim rates and effective dates. California Water has also taken notable steps to improve its balance sheet with two separate issuances of common stock totaling \$77 million since August 2003, reducing debt leverage to about 50%. Capital requirements are high at \$85 million in 2005 and between \$70 million and \$80 million per year through 2009.
Calpine Corp.	B-/Negative/--	Wolinsky	Calpine's liquidity remains a credit concern, given the company's weak and volatile cash flow generation and high debt leverage. The negative outlook reflects Calpine's weak financial ratios and expected negative funds from operations for 2005. The ratings could be lowered if Calpine is unable to secure the needed cash from asset sales, monetizations, and financings or gas prices were to decline significantly, which could cause Calpine's cash shortfall to be greater than expected. Over the longer term, the ratings could be lowered if Calpine is unable to refinance the \$1.2 billion of second lien debt in 2007. A move to a stable outlook is highly unlikely in the near term but could occur if spark spreads increase substantially and Calpine's cash flow turns positive.

Calpine Construction Finance Co	B-/Negative/—	Wolinsky	See Calpine Corp.
Calpine Generating Co. (CalGen)	B-/Negative/—	Wolinsky	The rating is linked to the 'B-' rating on Calpine Corp. because CalGen is not structurally separate from Calpine and could be consolidated into a Calpine bankruptcy. CalGen also receives credit support from Calpine in the form of a \$750 million working capital facility and a de facto guarantee of operating performance through the power purchase agreement with Calpine Energy Services (see Calpine Corp.).
Cascade Natural Gas Corp.	BBB+/Positive/—	Carrillo	The company has experienced steadily improving financial results over several years, including ongoing gradual debt reduction, but has also benefited from favorable regulatory support and solid customer growth. While overall financial performance may be more moderate in 2005, cash flow coverage is still expected to be strong. The company's exposure to gas cost volatility is significantly mitigated by a purchased gas cost mechanism. Ratings improvement will depend on management's ability to execute on its planned debt reduction efforts to sustain high levels of cash flow coverage and to prudently hedge its expected load over the near term to avoid a recurring accumulation of gas cost deferrals.
CenterPoint Energy Inc.	BBB/Negative/—	Taylor	There remains lingering uncertainty in the CenterPoint Energy Houston Electric stranded cost true-up case, as both the true-up order and financing order have been appealed. Maturities should not be pressured due to cash received from the closing of the Texas Genco sale and the use of a backstop credit facility that covers the \$1.31 billion term loan due in November. If securitization proceeds are received, or Standard & Poor's becomes relatively certain of their near-term receipt, CenterPoint's outlook will likely be revised to stable.
CenterPoint Energy Resources Corp.	BBB/Negative/—	Taylor	See CenterPoint Energy Inc.
Houston Electric LLC	BBB/Negative/—	Taylor	See CenterPoint Energy Inc.
Central Hudson Gas & Electric Corp.	A/Stable/—	Beicke	Ratings are based on the overall credit profile of parent CH Energy Inc. The parent is looking to redeploy about \$100 million in cash on hand (cash balance \$110 million as of March 31, 2005), combined with a similar amount of debt, and apply toward building a portfolio of energy related assets. The first step was taken in November 2004 when Central Hudson Enterprises Corp. (CHEC) made an equity investment totaling \$10.7 million in an ethanol production facility in Nebraska. Standard & Poor's expects further investments in CHEC to be in line with the company's existing businesses. Any significant increase in the scale or scope of investments in nonregulated businesses could negatively affect the rating or outlook on the utility.
Central Vermont Public Service Corp.	BB+/Stable/—	Silva	On June 10, 2005, Standard & Poor's lowered its corporate credit rating on Central Vermont Public Service Corp. to 'BB+' from 'BBB-'. The downgrade was in response to an April 2005 Vermont Public Service Board rate order requiring Central Vermont to provide customers with a rate refund of approximately \$6 million in June 2005 and to reduce rates by 2.75% effective April 1, 2005. By reducing funds from operations by roughly 20% in the current year and 10% in subsequent years, the rate order undermines the company's already pressured financial position. It also limits the company's ability to generate adequate and stable cash flows over the foreseeable future.
Cinergy Corp.	BBB+/CW-Neg/A-2	Shipman	The ratings on Cinergy are on CreditWatch with negative implications due to plans to merge with lower-rated Duke Energy. Current stand-alone ratings are based on the company's strategic focus on operating as a virtually fully integrated utility. The ratings are constrained by higher-risk, nonregulated activities, including its energy marketing and trading activities. Cinergy's need to spend significant amounts on environmental compliance for its coal-fired generating fleet will put pressure on credit quality. The

			continued growth in unregulated trading operations and energy services activities also constrains ratings, and is expected to remain a concern for the post-merger company.
Cincinnati Gas & Electric Co.	BBB+/Watch Neg/A-2	Shipman	See Cinergy Corp.
PSI Energy Inc.	BBB+/Watch Neg/A-2	Shipman	See Cinergy Corp.
Union Light Heat & Power Co.	BBB+/Watch Neg/--	Shipman	See Cinergy Corp.
Cleco Corp.	BBB/Negative/--	Tsokanos	Cleco is in the process extricating itself from failed unregulated power ventures and refocusing on core utility operations. The slow-growing though stable utility is hampered by a supply position in which generation represents only about 50% of peak power requirements, with the shortfall filled by short-term purchased-power agreements. The company is currently exploring long-term solutions to the generation gap. Efforts to sell a merchant plant have faced persistent delays, and a dispute with tolling counterparty Calpine threatens to reduce cash flow from unregulated power generation operations. While credit measures should improve after the company repays 2005 debt maturities, merchant power challenges and the supply position at the utility puts pressure on Cleco's ratings.
Cleco Power LLC	BBB/Negative/--	Tsokanos	See Cleco Corp.
CMS Energy Corp.	BB/Stable/--	Janiak	CMS Energy's significantly improved liquidity, continued focus on its low-risk, core utility operations, and significant reduction of its parent level debt over the past few years from \$5.6 billion at year-end 2001 to \$2.7 billion at year-end 2004 resulted in the revision of its outlook to stable from negative. Furthermore, CMS has addressed most of its debt maturities through 2005 and 2006 while maintaining adequate liquidity. Nevertheless, the current ratings and stable outlook are contingent on CMS Energy maintaining adequate liquidity while it continues to focus primarily on its core utility operations and reduce its high leverage to further improve its financial profile.
Consumers Energy Co.	BB/Stable/--	Janiak	See CMS Energy Corp.
Cogentrix Energy Inc.	BB-/Stable/--	Acar	Operational performance continues to be solid with an average availability factor of 95% or above. The company's parent cash flow coverage of 2.65x in 2004 was better than the projected 1.95x, mostly due to \$36 million of one-time true-up payment received related to Cedar Bay. Parent cash flow to interest coverage is expected to be around 1.8x for 2005 and above 2.0x after 2005. Cogentrix Energy acquired about 978 MW of generating assets on Jan. 31, 2005, from National Energy Company LLC. The acquisition, as well as about \$200 million of refinancing, was funded with a \$650 million bank loan rated 'BB+', and \$100 million of equity from Cogentrix's parent, Goldman Sachs Group Inc. (A+/Stable/A-1).
Colonial Pipeline Co.	A/Stable/A-1	Lee	The ratings on Colonial Pipeline continue to benefit from the company's superior geographic reach, access to Gulf Coast refineries as well as Southeast, Mid-Atlantic, and Northeast markets, strong market position, regulation by the FERC that is favorable for credit quality, solid operating cash flows, renewed focus on pipeline safety, and owner constituency. However, increased capital expenditures needed to comply with ultra-low sulfur diesel regulations effective mid-2006, if financed entirely with debt, could pressure the company's credit quality.
Connecticut Water Service Inc.	A/Stable/--	Beicke	In May 2005, Connecticut Water completed the sale of its Cape Cod, Mass. water utility The Barnstable Water Co. to the town of Barnstable for \$10 million. As part of the transaction, the town entered into a contract with the company to receive its operating and management services for the Barnstable water utility. The town is also scheduled to acquire 109 acres of non-watershed land in early 2006 from Connecticut Water's unregulated real estate subsidiary BARLACO for \$1 million. Connecticut Water's financial

			performance has strengthened over the last year due to increased revenues, cost savings initiatives, and the company's redemption of its first mortgage bonds.
The Connecticut Water Co.	A/Stable/--	Beicke	See Connecticut Water Service Inc.
Consolidated Edison Inc.	A/Stable/A-1	Wolinsky	Standard & Poor's expects the company's financial ratios to weaken in 2005 due to regulatory lag associated with the capital program. The company should bring debt levels back in line by 2007 through equity issuances and regulatory rate relief.
Consolidated Edison Co. of New York Inc.	A/Stable/A-1	Wolinsky	See Consolidated Edison Inc.
Orange and Rockland Utilities Inc.	A/Stable/A-1	Wolinsky	See Consolidated Edison Inc.
Rockland Electric Co.	A/Stable/A-1	Wolinsky	See Consolidated Edison Inc.
Constellation Energy Group Inc.	BBB+/Stable/A-2	Hsieh	Driven by a growing competitive supply business and continued debt reduction, Constellation recorded an funds from operations (FFO) interest coverage of 4.6x and FFO to debt of 23.8% for the 12 months ending March 2005. As Constellation expands its competitive supply business, Standard & Poor's expects the company to continue to maintain an appropriate level of liquidity and a set of robust financial measures commensurate with the business risk profile associated with the company's competitive supply business, which is still a relatively new and growing business.
Baltimore Gas & Electric Co.	BBB+/Stable/A-2	Hsieh	See Constellation Energy Group.
Covanta Energy Corp.	B+/Stable/--	Taylor	Following the completion of the acquisition of American Ref-Fuels, Covanta's rating was raised to 'B+'. It continues to be a highly leveraged entity, but Standard & Poor's continues to expect stable cash flow from its waste-to-energy businesses. Leverage should decline over the medium term as requirements to maintain letter of credit facilities decline, subsidiary debt is amortized, and operating and interest expenses are reduced. Over the longer term, an established trend of reduced financing costs and business stability needs to be established for the rating to improve.
CrossCountry Energy LLC	BBB/Stable/--	Lee	The ratings on CrossCountry benefit from cash flows from 100%-owned subsidiary Transwestern Pipeline, combined with dividends from 50% owned subsidiary Citrus Corp. (parent to Florida Gas Transmission). In November 2004, CrossCountry was sold to CCE Holdings LLC, a joint venture of Southern Union Co. (50%-ownership interest), GE Commercial Finance Energy Financial Services (now 30% owners), and minority owners (now 20%). Transwestern recently completed construction on of San Juan lateral expansion, which went into service on May 1, 2005, adding 375 million cubic feet per day of capacity. Transwestern is also currently in negotiations with customers to construct a new lateral off of its main line into the Phoenix market. Current ratings are premised on expectations that cash flows continue to buoy credit metrics, debt levels remain balanced, recontracting risks stays manageable, additional large expansions at Transwestern do not materialize in coming years, and dividends received from Citrus equal or exceed Citrus' earnings.
Transwestern Holding Co. LLC	BBB/Stable/--	Lee	See CrossCountry Energy LLC
Transwestern Pipeline Co. LLC	BBB/Stable/--	Lee	See CrossCountry Energy LLC
Dominion Resources Inc.	BBB+/Negative/A-2	Prabhu	The extension of the rate freeze for subsidiary Dominion Virginia lends stability to cash flow through 2010 but adds fuel cost escalation risks. Despite mitigating risks by hedging of gas production and acquiring supply contracts for merchant generation, Dominion's leverage remains high and cash coverages, albeit improving, still lag expectations. The company has also indicated that 2005 will be a year for consolidating existing businesses, and no significant acquisitions are expected. While no significant debt reduction has been achieved through April 2005, paydown

			of debt from Canadian assets and prevailing hydrocarbon prices should help the company in improving debt leverage by year-end 2005 as a result of increasing cash flow from new projects.
Consolidated Natural Gas Co.	BBB+/Negative/A-2	Prabhu	See Dominion Resources Inc.
Virginia Electric & Power Co.	A-/Stable/A-2	Prabhu	The rate-capped structure has been extended through 2010 and entails a freeze on the existing fuel factor through June 2007. The fuel factor could lower the utility's credit profile, even though escalation in fuel is offset to an extent by higher revenues for the exploration and production business at the consolidated level. The extension allows Virginia Power to continue recovery of capacity payments on its non-utility generator contracts at the established levels through 2010, enabling it more time to buydown these contracts.
DPL Inc.	BB/Positive/--	Janiak	The sale of a sizable portion of its higher-risk investment portfolio, combined with the fact that the company plans to use such cash proceeds toward debt reduction, bolsters DPL's overall creditworthiness. The positive outlook incorporates new managements continuing commitment to reconcile the company's former weak internal controls and corporate governance issues, combined with the utility generating sufficient cash flow to further reduce of DPL's consolidated debt leverage. Future upward ratings momentum will be strongly correlated with the actual timing of the sale of its remaining investment portfolio and management's ultimate use of cash proceeds toward the balancing of debt reduction and reinvestment needs in its core operations.
Dayton Power & Light Co.	BB/Positive/--	Janiak	See DPL Inc.
DTE Energy Co.	BBB/Stable/A-2	Kennedy	Stemming customer attrition in 2005 is a major challenge for Detroit Edison. The company has filed a rate rationalization plan and a final order is expected by the end of 2005. Also, the company has announced a potential \$700 million share repurchase. The actual amount of repurchases (expected through 2008) will depend upon DTE's ability to generate sufficient cash flow to pay down debt and make new investments. Finally, Standard & Poor's will monitor DTE's ability to utilize cash flow from its synthetic fuel business. The company expected this operation to generate about one-third of its total cash flow in 2005. However, DTE could lose the ability to utilize about \$130 million of the cash flow, due to the potential disallowance of tax credits or poor economics associated with production.
Detroit Edison Co.	BBB/Stable/A-2	Kennedy	See DTE Energy Co.
Michigan Consolidated Gas Co.	BBB/Stable/A-2	Kennedy	See DTE Energy Co.
Duke Energy Corp.	BBB/Watch Neg/A-2	Nikas	The ratings on Duke Energy are on CreditWatch with negative implications after its proposal to acquire Cinergy Corp. The CreditWatch listing reflects the uncertainty surrounding certain strategic decisions, including the potential separation of the electric and gas regulated assets, uncertainty as to a final legal corporate structure, reservations about the company's ability to realize all of the proposed cost savings, and the potential for the merchant generation operations to become profitable, presenting management with the incentive to increase the size of the business.
Duke Capital LLC	BBB/Watch Neg/A-2	Nikas	See Duke Energy Corp.
Duke Energy Field Services LLC (DEFS)	BBB/Stable/--	Nikas	DEFS' financial profile has benefited materially from strong natural gas liquids prices and the generally healthy margin between natural gas liquids (NGL) and gas prices, as well as DEFS' success in renegotiating contracts and continued reductions in operating cost. In addition, the financial profile has benefited from recent gas gathering asset acquisitions in southwestern New Mexico and gas gathering and processing and NGL transportation assets on the Gulf

			Coast.
PanEnergy Corp.	BBB/Watch Neg/--	Nikas	See Duke Energy Corp.
Texas Eastern Transmission LP	BBB/Watch Neg/--	Nikas	See Duke Energy Corp.
Duke Energy Trading and Marketing LLC	BBB-/Watch Neg/--	Hsieh	Duke Energy Trading and Marketing is scaling down its activities and has sold a significant portion of its assets. However, while the company still has a sizable trading portfolio, Duke Capital's liquidity support is critical to Duke Energy Trading and Marketing's investment-grade status.
Duquesne Light Holdings Inc.	BBB-/Negative/--	Jepsen	The strong business risk profile of Duquesne Light Co.'s low-risk transmission and distribution utility and the parent's exit from riskier competitive businesses are offset by Duquesne Light Holdings' weak, but improving, financial profile, supply risks from the utility's provider-of-last-resort (POLR) obligation, higher risk from a remaining unregulated portfolio, the potential for paying additional state taxes that could be up to \$90 million, and the expected loss of operating income from synthetic fuel facilities after 2007 that have been contributing about 18% to earnings. Although the Pennsylvania Public Utility Commission's approval of Duquesne Light's supply plan for the 2005-2007 period eliminated uncertainty about the company's POLR plan after 2004, the utility now has supply risk from its POLR obligations. Based on its projected load for this period, the company locked in supply requirements, partly eliminating supply risk. The commission deferred a decision on a supply plan for the 2008-2010 period, creating uncertainty after 2007.
Duquesne Light Co.	BBB-/Negative/--	Jepsen	See Duquesne Light Holdings Inc.
Dynegy Inc.	B-/Negative/--	Kennedy	Dynegy's announcement that it will seek strategic alternatives for its midstream business does not affect the ratings. The alternatives may include selling the midstream business (\$278 million in 2004 cash flow) and applying the proceeds to debt reduction. The potential sale of the business unit would help to reduce Dynegy's high leverage, but Standard & Poor's notes that a sale also reduces the company's ability to generate cash flow and affect credit metrics. In April, Dynegy announced a \$468 million settlement with shareholders. The settlement includes a cash payment of \$250 million with the balance being funded through a \$150 million insurance payment and \$68 million in class A common stock. However, the company's ability to generate sustainable cash flow remains challenged.
Dynegy Holdings Inc.	B-/Negative/--	Kennedy	See Dynegy Inc.
Illinova Corp.	B-/Negative/--	Kennedy	See Dynegy Inc.
Edison International	BBB-/Stable/--	Bodek	Edison International's 2004 retirement of all of its debt with cash on hand strengthened the consolidated companies' credit metrics. The consolidated Edison company's credit profile is principally dependent on the success of its regulated utility subsidiary, Southern California Edison Co. (see entry on Southern California Edison). Edison Capital's contributions to the consolidated entity are about one-tenth of the utility's and Mission Energy Holding and its subsidiaries are currently barred by loan covenants from paying dividends to Edison International due to weak financial performance. Importantly, Edison International requires the Mission Energy Holding companies to be self-supporting and does not provide them with capital.
Edison Mission Energy	B+/Stable/--	Spangler	Since the close of the sale of the majority of its international portfolio for total proceeds of \$2.9 billion, Edison Mission Energy sold two other international assets for total proceeds of approximately \$125 million. Doga is the only remaining international asset. Operationally, all of the company's plants operate well and the first quarter saw power prices rise on the merchant assets resulting in higher cash flow. Edison Mission Energy remains exposed to merchant cash flow at Homer City and Midwest Generation, which

			comprise about 85% of consolidated cash flow. The asset sales and large cash balance allow the company to effectively alleviate all of its refinancing risk through 2011, assuming projects continue to provide cash flow as expected and cash is used to repay debt as it matures.
Edison Mission Marketing and Trading	B+/Stable/--	Spangler	Edison Mission Marketing & Trading is rated on a consolidated basis with Edison Mission Energy. Trading and marketing activities are largely restricted to hedging activities for coal-fired generation. Reduced access to credit is forcing cash-backed transactions.
Southern California Edison Co.	BBB+/Stable/A-2	Bodek	Long-term electricity and fuel procurement activities are ongoing and will define the utility's operational and financial profile. Financial performance remains exposed to volatile fuel and power procurement costs and the CPUC's response to material changes in utility costs. Also, expiration of contracts with the California Department of Water Resources and qualifying facilities in coming years will heighten financial exposure related to power procurement. Therefore, further rating actions beyond the recent rating upgrade are not anticipated. The recent upgrade reflected the interplay between sound financial performance and actions by the regulator that are protective of bondholder interests.
El Paso Corp.	B/Pos/B-3	Tsocanos	The company has made sold noncore businesses and is renewing focus on pipelines and exploration and production, after extensive forays into unsuccessful merchant power ventures. The proceeds from asset sales and successful capital market transactions put the company in a much improved position to meet its challenging near-term maturities, though refinancing risk remains a material concern. El Paso's exploration and production operations have consistently underperformed in recent years; new senior management in the production company will need to halt serious production declines and improve finding costs and reserve replacement metrics. Accounting and governance issues, including large reserve write-downs, weaknesses in internal controls, and recent SEC investigation present an additional drag on ratings. Additional rating improvement is possible, contingent on demonstrated progress in the upstream business and the financial profile.
ANR Pipeline Co.	B/Positive/B-3	Tsocanos	See El Paso Corp.
Colorado Interstate Gas Co.	B/Positive/B-3	Tsocanos	See El Paso Corp.
El Paso Natural Gas Co.	B/Positive/B-3	Tsocanos	See El Paso Corp.
Southern Natural Gas Co.	B/Positive/B-3	Tsocanos	See El Paso Corp.
Tennessee Gas Pipeline Co.	B/Positive/B-3	Tsocanos	See El Paso Corp.
El Paso Electric Co.	BBB/Stable/--	Waite	El Paso Electric was upgraded in August 2004 to reflect the overall improvement in the company's financial profile as well as the likelihood that rates in both the Texas and New Mexico service territories will continue to be regulated for the foreseeable future, assuring a degree of earnings stability. Management has continued to buy back debt and common stock in accordance with the 10-year rate settlement that ends in August 2005, and in 2005 tendered for the remaining outstanding secured debt. Approximately 80% of the debt was tendered and the remainder has been defeased. This will reduce costs and simplify the process of separating the business into component parts of supply and transmission/distribution when retail electric competition comes to El Paso Electric's service territory. More importantly, El Paso Electric has negotiated a 25-year franchise with the city of El Paso (78% of revenue) which will be approved by the city in July. The settlement has several favorable aspects for the credit of El Paso Electric, including an extension of current rates and the ability to file for higher rates if the return on equity falls below 8%. In 2007, El Paso will be obliged to negotiate a similar

			arrangement with Las Cruces, N.M., which accounts for about 28% of revenue.
Elizabethtown Water Co.	A+/Negative/--	Beicke	The ratings on Elizabethtown Water, a New Jersey-based water utility, reflect the consolidated credit quality of its ultimate parent, German multi-utility RWE AG.
Empire District Electric Co.	BBB/Stable/A-2	Jepsen	The company's business profile is heavily affected by historically difficult regulation, but a recent rate case ruling exceeded expectations and supports Empire's credit quality. Importantly for the company, the Missouri commission approved a higher than expected amount of fuel expense and authorized an interim energy charge that should improve the utility's fuel risk management and cost recovery. These approvals were critical because Empire had been operating without a fuel adjustment clause, and has a relatively high level of gas-fired generation. Because almost 90% of utility operating revenues are derived in Missouri, supportive regulation by the Missouri commission will be important for the company, particularly if Empire invests in new generation as it has indicated it would like to do. Regarding its strengthening financial profile, Empire has been focused on improving earnings and cash flow protection measures by hedging fuel expenses and controlling other costs. In the near term, the principal financial measures should continue to be in line with levels suitable for the 'BBB' rating.
Energen Corp.	BBB+/Stable/--	Silva	The ratings on Energen reflect the consolidated credit profile of the company and its subsidiaries, Energen Resources Corp. and Alabama Gas Co. Although strong commodity prices have bolstered consolidated cash flows significantly over the last three years, the company maintains a higher tolerance for debt than appropriate for an 'A' category company with material exposure to the oil and gas exploration and production sector. For example, the company targets a 60% equity-to-capital ratio, which is low for a company with above-average business risk. Increased participation in the oil and gas sector exposes the company to a competitive and cyclical industry with large capital requirements.
Alabama Gas Co.	BBB+/Stable/--	Silva	See Energen Corp.
Energy East Corp.	BBB+/Stable/A-2	Wolinsky	Standard & Poor's expects credit measures to improve over the intermediate term following the implementation of the approved rate settlement and use Ginna sale proceeds to reduce debt. The expectation is for funds from operations to debt to improve to 14% and debt to total capital to improve to 56% over the next few years. A move to a positive outlook is unlikely in the near term, given the current financial forecast. Debt reduction would have to significantly exceed the forecast to warrant a higher rating. A material increase in debt or significantly lower operating cash could cause a change in the outlook to negative.
Central Maine Power Co.	BBB+/Stable/A-2	Wolinsky	See Energy East Corp.
Connecticut Natural Gas Corp.	BBB+/Stable/A-2	Wolinsky	See Energy East Corp.
New York State Electric & Gas Corp.	BBB+/Stable/A-2	Wolinsky	See Energy East Corp.
Rochester Gas & Electric Corp.	BBB+/Stable/A-2	Wolinsky	See Energy East Corp.
Southern Connecticut Gas Co.	BBB+/Stable/A-2	Wolinsky	See Energy East Corp.
Entergy Arkansas Inc.	BBB/Stable/--	Kennedy	See Entergy Corp.
Entergy Corp.	BBB/Stable/--	Kennedy	In June 2005, the FERC announced that the Entergy system agreement is no longer just and reasonable. The FERC intends to revise the allocation of production costs among Entergy's operating companies by rejecting the current methodology of cost equalization and adopting a bandwidth remedy with annual reviews. The new methodology would help to equalize costs among companies without creating massive shifts in production costs. Standard & Poor's evaluates the Entergy family on a



			consolidated basis with less emphasis on individual costs and more on overall production costs. The company's liquidity is adequate with \$479 million in cash and cash equivalents and \$944.5 million in unused bank capacity available as of March 31, 2005. The Entergy family has \$1.59 billion in syndicated 364-day credit facilities, of which \$1.45 billion resides at Entergy. The remaining \$139 million in credit is at Entergy Arkansas, Entergy Mississippi, and Entergy Louisiana, of which none was drawn as of March 31, 2005. Also, the FERC has accepted the company's proposal to establish an independent transmission coordinator. Although this is necessary first step in a lengthy process, concerns remain regarding the state regulators' response to the proposal.
Entergy Gulf States Inc.	BBB/Stable/--	Kennedy	See Entergy Corp.
Entergy Louisiana Inc.	BBB/Stable/--	Kennedy	See Entergy Corp.
Entergy Mississippi Inc.	BBB/Stable/--	Kennedy	See Entergy Corp.
Entergy New Orleans Inc.	BBB/Stable/--	Kennedy	See Entergy Corp.
System Energy Resources Inc.	BBB-/Stable/--	Kennedy	See Entergy Corp.
Equitable Resources Inc.	A-/Stable/A-2	Janiak	Equitable's has continued its strategic initiatives to increase capital expenditures in its more risky exploration and production (E&P) operations, combined with its more aggressive financial policies, including its share repurchase program, dividend increases, and increased debt levels over the past few years. These qualitative and quantitative factors are not commensurate with a 'A' rating. Furthermore, the company's increasing focus on, and exposure to, the riskier E&P business challenges its credit quality by increasing the need to maintain stronger financial measures. The company's recent sale of its interest in Kerr McGee (\$240 million after tax), asset sale of some of its E&P properties, and announced plans to sell its Noresco energy services business should provide the company with additional proceeds to either reduce debt or reinvest in its core operations.
Exelon Corp.	A-/Watch Neg/A-2	Kennedy	The rating on Exelon remains on CreditWatch with negative implications while the awaits several regulatory approvals related to its announced agreement to merge with Public Service Enterprise Group Inc. This process is expected to take from 12 to 18 months from the date of the announcement on December 20, 2004. The company has obtained bridge financing to fund a \$2 billion pension contribution. Exelon completed its sale of SITHE to Dynegy, receiving \$135 million in proceeds.
Commonwealth Edison Co.	A-/Watch Neg/A-2	Kennedy	See Exelon Corp.
Exelon Generation Co. LLC	A-/Watch Neg/A-2	Kennedy	See Exelon Corp.
PECO Energy Co.	A-/Watch Neg/A-2	Kennedy	See Exelon Corp.
Explorer Pipeline Co.	-/-IA-1	Lee	The ratings on Explorer continue to benefit from FERC regulation that allows market-based pricing on all origins and destinations, ready access to Gulf Coast supplies, a diverse shipper base, and the implied support of its owners. However, Explorer has also recently experienced operational difficulties, as a pipeline rupture in September 2004 at Holdenville, Okla. released 1,500 barrels of high-sulfur diesel fuel into the environment, which necessitated shutting down the segment for a period, after which pressure on the segment was reduced. Explorer's historically high dividend payout, coupled with greater-than-expected capital spending to comply with the EPA's ultra low sulfur diesel regulations effective mid-2006, or continued safety and operational problems, could pressure ratings.
FirstEnergy Corp.	BBB-/Positive/--	Prabhu	The company's nuclear fleet continues to build a sustained operating track record of good performance that is required for higher ratings. Although much less likely, a downgrade

			could occur if the SEC and federal grand jury investigations result in significant financial penalties for the company. A quick resolution of the investigation will remove uncertainty and also provide potential for an upgrade. While net debt reduction in 2005 is expected to be about \$700 million, due to higher maintenance expenditure, projected free cash flow of \$400 million in 2005 will be substantially lower compared to 2004. Yet, financial performance has improved substantially. Liquidity is now strong.
Cleveland Electric Illuminating Co.	BBB-/Positive/--	Prabhu	See FirstEnergy Corp.
Jersey Central Power & Light Co.	BBB-/Positive/--	Prabhu	See FirstEnergy Corp.
Metropolitan Edison Co.	BBB-/Positive/--	Prabhu	See FirstEnergy Corp.
Ohio Edison Co.	BBB-/Positive/--	Prabhu	See FirstEnergy Corp.
Pennsylvania Electric Co.	BBB-/Positive/--	Prabhu	See FirstEnergy Corp.
Pennsylvania Power Co.	BBB-/Positive/--	Prabhu	See FirstEnergy Corp.
Toledo Edison Co.	BBB-/Positive/--	Prabhu	See FirstEnergy Corp.
Florida Gas Transmission Co. (FGT)	BBB+/Stable/--	Lee	FGT's ratings continue to benefit from the strength of its business profile, recent completion of large expansion projects, coincident reduction in external borrowing needs, and improved credit metrics. FGT is currently planning its Phase VII expansion, which is expected to be relatively moderate in scale at an estimated capital cost of \$80 million. FGT faces increasing competition from Gulfstream Natural Gas System, a joint venture of The Williams Cos. Inc. and Duke Energy Corp., which expanded its reach to Florida Power & Light Co.'s Martin plant when it placed its Phase II extension into service in February 2005. However, FGT maintains the competitive advantage of its incumbent status. The current ratings are based on the expectation that large expansion needs will not materialize in coming years and future dividend payout levels will not erode coverage ratios or other credit metrics.
FPL Group Inc.	A/Negative/--	Hecht	FPL Group's consolidated financial performance for the 12 months ended March 31, 2005 was below expectation, driven by the lingering impact of the hurricanes on the utility and the lower earnings at FPL Energy due to restructuring activities. The short-term focus remains the the hearings for the storm cost recovery before the Florida Public Service Commission and the upcoming rate case.
Florida Power & Light Co.	A/Negative/A-1	Hecht	See FPL Group Inc.
FPL Group Capital Inc.	A/Negative/A-1	Hecht	See FPL Group Inc.
Great Plains Energy Inc.	BBB/Stable/--	Carrillo	In 2005, Great Plains Energy's regulated subsidiary, Kansas City Power & Light, signed stipulated agreements with the staffs of the Missouri Public Service Commission and the Kansas Corporation Commission that support the regulated utility's large \$1.3 billion five-year capital investment program, which includes 500 MW of new coal capacity and 100 to 200 MW of new wind capacity. The agreement is subject to the review and approval by both the commissions. Great Plains' nonregulated energy marketing subsidiary, Strategic Energy, continues to increase sales, but gross margins have declined due to its challenging market environment. The stable outlook assumes strong cash flow coverage, a near-term reduction in debt leverage, favorable regulatory support for major capital additions at the utility, and steady operating cash flow and conservative risk management at Strategic Energy.
Kansas City Power & Light Co.	BBB/Stable/A-2	Carrillo	See Great Plains Energy Inc.
Green Mountain Power Corp.	BBB/Stable/--	Silva	The company operates in a challenging regulatory environment. Recently, state regulators ordered the largest utility in Vermont (Central Vermont) to refund approximately \$6 million in June 2005 and to reduce rates by 2.75% effective April 1, 2005. In this order, regulators determined that Central Vermont had exceeded its earnings cap and

			also cut the company's allowable ROE. Although Green Mountain calculated its ROE similarly to Central Vermont, the company does not maintain material net assets (i.e., cash) on its balance sheet that would normally be excluded from rate base. Moreover, regulators recognize that Green Mountain is exposed to material customer concentration risk. As such, they allow the company to earn a higher allowable ROE (10.5%) than Central Vermont (10%).
Hawaiian Electric Industries Inc.	BBB/Negative/A-2	Eiseman	The negative outlook on Hawaiian Electric Industries reflects the declining trend in the company's consolidated financial condition, despite the strong Hawaii economy and the company's efforts in recent years to strengthen capital structure balance. The company's financial metrics have been pressured owing to rising operating expenses, yet-to-be recovered investments, and the long-term lack of rate relief. Absent credit supportive measures by the company and a responsive decision in Hawaiian Electric's pending rate case, prospective key financial metrics may not support a financial profile that is commensurate for the current ratings. Although there are no time restrictions for the commission to issue a final order, an interim decision is possible by the fourth quarter of 2005.
Hawaiian Electric Co. Inc.	BBB+/Negative/A-2	Eiseman	See Hawaiian Electric Industries Inc.
IDACORP Inc.	BBB+/Stable/A-2	Venkataraman	With the issuance of \$115 million in common stock in December 2004, IDACORP's financial profile is expected to be commensurate with expectations for a 'BBB+' rating from 2005 forward. IDACORP has more than \$600 million in capital requirements in the next two years but external funding needs are expected to be modest. The stable outlook reflects expectations for stable cash generation from the utility and the absence of any significant unregulated businesses. Two key issues that would determine future ratings movement are water flows in the Snake River, which are currently weak, and future rate case rulings by the commission.
Idaho Power Co.	BBB+/Stable/A-2	Venkataraman	See IDACORP Inc.
Iroquois Gas Transmission System L.P.	BBB+/Stable/--	Shipman	The Iroquois Gas Transmission System is a limited partnership of gas distribution utilities, electric generators, and pipeline companies. The company is substantially contracted for firm ship-or-pay contracts under a competitive tariff through 2011 with a diverse basket of financially strong shippers. The pipeline system has a good operating history. A major expansion of the pipeline into New York City has enhanced the system, but encountered construction problems and delays that hurt credit quality. The issue is now behind Iroquois, although legal repercussions may yet be felt. It is not expected to have a meaningful impact on the ratings. A minor accounting problem recently caused the company to withdraw its 2004 financial statements, which will be restated soon. The situation should have no effect on credit quality.
ITC Holding Corp.	BBB/Stable/--	Jepsen	The company has an excellent business profile as the sole provider of transmission service to Detroit Edison Co. and has minimal competitive risk because of high regulatory and political barriers to entry. Following the end of the rate freeze, the company increased its transmission rate by nearly 50% under a FERC-approved tariff. Prospectively, rates are to be adjusted annually each June and the company will continue to require annual rate increases to recover capital spending that has more than doubled from initial estimates. Although the company expects to maintain a highly leveraged capital structure, coverage ratios and liquidity should strengthen primarily from annual incremental rate increases following the rate freeze and the expected equity infusion from a sizeable IPO in the near term.
International Transmission Co.	BBB/Stable/--	Jepsen	See ITC Holding Co.
KeySpan Corp.	A/Stable/A-1	Nikas	KeySpan's financial profile has remained adequate for the rating in light of recent debt and commercial paper

			redemptions, while its business risk profile has moderated materially after the disposal of its noncore interests in Houston Exploration and Keyspan Canada. Nevertheless, Standard & Poor's maintained its consolidated business profile of '4' to reflect Keyspan's stated intention to pursue growth opportunities in unregulated power generation backed by long-term contracts. Keyspan has delayed until December 2005 the execution of the purchase agreement with the Long Island Power Authority to give the authority additional time to consider various restructuring alternatives. Standard & Poor's will assess the effect of the agreement on Keyspan's credit profile as details of the agreement become available.
Boston Gas Co.	A/Stable/--	Nikas	See Keyspan Corp.
Colonial Gas Co.	A/Stable/--	Nikas	See Keyspan Corp.
Keyspan Energy Delivery Long Island	A+/Stable/--	Nikas	See Keyspan Corp.
Keyspan Energy Delivery New York	A+/Stable/--	Nikas	See Keyspan Corp.
Keyspan Generation LLC	A/Stable/--	Nikas	See Keyspan Corp.
Kinder Morgan Inc.	BBB/Stable/A-2	Shipman	Distributions from Kinder Morgan Energy Partners L.P. (KMP) now represent more than half of Kinder Morgan Inc.'s total cash flow following the 2004 sale of TransColorado pipeline to KMP, a trend that, if continued, could ultimately cause ratings convergence of the two entities. Escalated share repurchase activity, tripling of dividends during since the change in tax treatment of dividends in 2003, and the prospect that additional significant increases are possible, combined with likely share repurchases, more than offset the beneficial effect of moderate recent debt reduction. Ample liquidity and decent cash flow generation outlook provide comfort for the company's ability to meet its \$500 million debt maturity in 2005.
Laclede Group Inc. (The)	A/Stable/--	Eiseman	Laclede Group's somewhat weak financial metrics should continue to gradually strengthen owing to prospects for rate relief in 2006, a weather-mitigation rate design, the allowed twice-yearly rate adjustments on certain facility-related expenditures, the issuance of new shares of stock under the company's dividend reinvestment plan, and prospects for increased profits from unregulated ventures. A supportive rate decision in subsidiary Laclede Gas' pending rate case for a \$39 million gas rate hike will be a key factor in sustaining a financial profile that is commensurate with the current ratings. A Missouri Public Service Commission decision is expected around the end of 2005.
Laclede Gas Co.	A/Stable/A-1	Eiseman	See The Laclede Group Inc.
LG&E Energy LLC	BBB+/Stable/--	Shipman	LG&E's two utilities in Kentucky are good performers, with low costs, a reasonable regulatory environment, and high customer satisfaction ratings. Capital spending will be a priority for the next few years as environmental compliance upgrades and the new capacity requirements will burden the utilities with large cash needs. Parent company E.ON AG continues to state its support for LG&E Energy, which is important for ratings stability.
Kentucky Utilities Co.	BBB+/Stable/A-2	Shipman	See LG&E Energy Corp.
LG&E Capital Corp.	BBB+/Stable/A-2	Shipman	See LG&E Energy Corp.
Louisville Gas & Electric Co.	BBB+/Stable/A-2	Shipman	See LG&E Energy Corp.
Madison Gas & Electric Co.	AA/Negative/A-1+	Jepsen	Although Madison Gas & Electric is strong and conservatively managed with supportive state regulation, these strengths are moderated by the higher business risk from its unrated holding company, MGE Energy, which may own and finance all the utility's future generation facilities and lease the capacity to the utility. MGE Energy's capital spending through 2011 includes a 150 MW cogeneration facility and perhaps an 8% ownership interest in two coal units to built in Wisconsin. Because MGE Energy will partly

			fund its capital spending internally, the company will have negative discretionary cash flow after dividends and require incremental borrowings. Financing must be prudent to maintain the company's credit profile and access to capital.
MDU Resources Group Inc.	A-/Negative/A-2	Harvey	Near-term earnings are expected to be helped by the continued strong natural gas and crude oil prices received by MDU's exploration and production subsidiary, although somewhat offset by the June ruling limiting Fidelity Exploration's ability to drill for coal bed methane gas in Montana. The reduction in drilling activity is expected to limit 2005 production to only around 2004 levels. MDU is expected to continue to make opportunistic acquisitions in its nonregulated businesses, such as the April \$145 million acquisition of oil and natural gas properties in South Texas, and the acquisition of several small construction materials companies in June, that were funded in a manner that does not deteriorate its balance sheet strength. However, a growing dependence on acquisitions for growth, particularly in its exploration and production division, would be viewed negatively.
Montana-Dakota Utilities Co.	A-/Negative/--	Harvey	See MDU Resources Inc.
MidAmerican Energy Co.	A-/Stable/A-1	Taylor	Standard & Poor's expects continued stable performance from MidAmerican. The company continues construction of two projects: a coal-fired plant expected to be completed in 2007 and up to 360 MW of wind generation expected to be completed this year. The company's rate settlement agreement extends through Dec. 31, 2011. Standard & Poor's expects additional debt issuance and reduced dividends to MidAmerican Energy Holdings to finance capital spending, which has been incorporated in the rating.
MidAmerican Energy Holdings Co.	BBB-/Watch Pos/--	Taylor	Standard & Poor's expects that the proposed acquisition of PacifiCorp will be financed in a credit accretive manner for parent-level bondholders, as has been the company's history. Cash flow has improved as the effects of the two major pipeline acquisitions and the CE Casecan settlement have taken hold. A rate case resolution and long-term contract extensions at Northern Natural Gas add to predictability. The company continues to look for investment opportunities, which would likely be funded in large part by preferred trusts from Berkshire Hathaway.
Middlesex Water Co.	A-/Stable/--	Lee	The June 2005 downgrade of the company reflected continued heavy capital spending needs at Tidewater Utilities Inc., the regulatory uncertainty surrounding new wastewater operations at Tidewater Environmental Services Inc. (TESI), a historically high dividend payout, and a moderate financial profile. Tidewater's capital expenditure needs are high and expected to increase going forward, although its regulatory environment appears to have stabilized. Regulatory treatment for TESI, which is also expected to be capital intensive, remains uncertain given recently passed legislation in Delaware regarding newly regulating wastewater facilities. Middlesex's moderate financial profile, including a high dividend payout and weak funds from operations to total debt measures, is more commensurate with the 'A-' rating category.
Midwest Independent System Operator (MISO)	A-/Stable/--	Pratt	MISO began its energy and congestion revenue rights markets on April 1, 2005, and has not reported any material issues that would affect credit. Successful operation of the markets could reduce the potential for member migration to other regional transmission organizations. Unfavorably, in late December 2004, Louisville Gas & Electric Co. and Kentucky Utilities Co., which provide about 6% of Schedule 10 load, said that they will withdraw from MISO by year-end 2005 if the FERC and the Kentucky Public Service Commission allow it. However, the financial risk to MISO would be mitigated by the utilities' estimated \$40 million total exit fee.
National Fuel Gas Co.	BBB+/Stable/A-2	Kennedy	National Fuel Gas Co. has reached a settlement agreement

			on its recently filed rate case and is now awaiting approval. If approved, the rate increase of \$21 million would be the first since 1998. This follows a \$12 million rate settlement for its Pennsylvania distribution business, which was approved in March. National Fuel Gas will be expanding its Empire State Pipeline, which should bolster the company's business profile given its strategic location in a capacity-constrained region. Furthermore, Standard & Poor's expects the company's refocused exploration and production strategy to strengthen the financial profile.
Massachusetts Electric Co.	A/Stable/A-1	Jepsen	See National Grid USA.
Narragansett Electric Co.	A/Stable/A-1	Jepsen	See National Grid USA.
National Grid USA	A/Stable/A-1	Jepsen	The company is one of the largest electric transmission and distribution operators in the New England area (Massachusetts, Rhode Island, and New York), and is owned by U.K.-based National Grid Transco PLC. Credit quality is bolstered by supportive regulation, stable electricity and gas transmission and distribution operations, a strong financial profile, and the relationship with National Grid. The U.S. operations provide material stability to cash flows and some growth opportunities to the U.K. parent. Any potential expansion in the U.S. is expected to be financed conservatively and in a manner consistent with the current rating, presenting no material adverse impact on National Grid's credit profile. Given the generally lengthy regulatory approval process in the U.S., National Grid is expected to further reduce debt before a purchase is completed.
New England Power Co.	A/Stable/A-1	Jepsen	See National Grid USA.
Niagara Mohawk Power Corp.	A/Stable/--	Jepsen	See National Grid USA.
New Jersey Natural Gas Co.	A+/Stable/A-1	Lee	New Jersey Natural Gas continues to benefit from an attractive service area (enhanced by the recent housing boom in Ocean County, N.J.), above-average customer growth, and favorable regulation by the New Jersey Board of Public Utilities. These strengths are slightly moderated by the high cost of interstate pipeline Texas Eastern Pipeline and the greater risk of nonregulated activities at parent New Jersey Resources, with NJR Energy Services expected to constitute 15% to 20% of consolidated earnings in 2005. The stable outlook reflects the expectation that New Jersey Resources will focus primarily on regulated investments, maintain strong credit metrics, and refrain from an excessive use of debt to finance growth projects or non-regulated pursuits.
New York Water Service Corp.	BB/Stable/--	Beicke	The ratings reflect the aggressive financial profile and weak business profile of New York Water's unrated parent company, Utilities & Industries Management Corp. The parent's nonregulated operations include an industrial spring manufacturing business, a newspaper business, and an interest in a real estate development. The utility filed a rate case in 2004 and received a 3.19% rate increase that went into effect May 1, 2005, which should improve financial metrics at the utility. Consolidated financial performance improved significantly last year, following three years of lackluster credit measures that were caused by the weak economy's effect on the company's spring manufacturing business and losses at the newspaper business. On a consolidated basis for fiscal 2004, adjusted funds from operations to average total debt was 31% and adjusted EBIT interest coverage was 1.3x.
Nicor Inc.	AA/Negative/A-1+	Eiseman	Notwithstanding recent erosion in Nicor's financial profile, key metrics still remain suitable for current ratings. However, the company faces investigations into alleged abuses of Nicor's main subsidiary Nicor Gas' performance-based rate program and a possible civil injunctive action. Nicor Gas is awaiting a decision on a \$77 million rate request related to recovery of capital investments made since 1996, as well as higher operating costs. Absent a supportive rate order and/or a harsh financial penalty

			related to outstanding regulatory and legal issues, Nicor's financial profile may no longer support mid 'AA' ratings. Responsive rate treatment should lead to ratings stability. In Standard & Poor's view, Nicor's financial profile could withstand a one-time financial penalty related to the performance-based rate program absent a surprisingly severe ruling.
Nicor Gas Co.	AA/Negative/A-1+	Eiseman	See Nicor Inc.
NiSource Inc.	BBB/Stable/--	Eiseman	NiSource has taken meaningful actions to strengthen its aggressively leveraged balance sheet and improve its overall financial profile. Virtually all of NiSource's operating income and cash flow is now derived from regulated activities. NiSource's bondholder protection parameters are still somewhat weak for current ratings and may slip slightly in 2005 given the impact of recent pipeline recontracting at somewhat lower rates as well as the requirement to increase sharing of off-system sales and capacity release proceeds in Ohio. However, effective cost containment, including the outsourcing of certain business functions, lower interest expense, and favorable ratemaking mechanisms, should help bring the company's financial measures up to more appropriate levels in 2006.
Bay State Gas Co.	BBB/Stable/--	Eiseman	See NiSource Inc.
Columbia Energy Group	BBB/Stable/--	Eiseman	See NiSource Inc.
Northern Indiana Public Service Co.	BBB/Stable/--	Eiseman	See NiSource Inc.
Northeast Utilities (NU)	BBB/Stable/--	Spangler	The May 2005 downgrade of NU reflected Standard & Poor's view that the company's credit protection measures are weak and will continue to deteriorate until the costs of a major construction program are recovered in rates. Connecticut Light & Power Co. (CL&P) is engaged in a major construction plan to expand and upgrade its transmission and distribution network in Connecticut. This will require the subsidiary to issue about \$200 million annually from 2005 to 2009. However, CL&P will not begin to recover the costs related to this program until sometime in 2007 to 2008 when the transmission investments are expected to begin to enter service. The result will be a weakened financial profile for many years. Furthermore, although NU has announced its intention to sell certain of its unregulated operations, it is still subject to execution risk regarding the sale and remains exposed to the generation and retail supply businesses, which both represent high business risk. The stable outlook on NU and its subsidiaries reflects Standard & Poor's expectation that over time, the regulated businesses of NU will dominate the business profile.
Connecticut Light & Power Co.	BBB/Stable/--	Spangler	See Northeast Utilities.
Northeast Generation Co.	BB+/Negative/--	Spangler	See Northeast Utilities.
Public Service Co. of New Hampshire	BBB/Stable/--	Spangler	See Northeast Utilities.
Western Massachusetts Electric Co.	BBB/Stable/--	Spangler	See Northeast Utilities.
Yankee Gas Services Co.	BBB/Stable/--	Spangler	See Northeast Utilities.
Northern Border Pipeline Co.	BBB+/Stable/--	Shipman	The company is expected to continue to generate very stable earnings and cash flow performance due to its favorable market position, low cost structure, access to ample supply of natural gas, and the highly regulated nature of its business. Although the pipeline has a record of operating the system at full capacity under contracts with creditworthy parties, direct exposure to the highly competitive Chicago market and other market dynamics in the service area challenge the company to manage its portfolio of capacity contracts as they expire. Almost all of the capacity that expired in 2004 has been recontracted, but the company has recently encountered a drop off in demand for capacity during certain times of the year. A prompt response by management to the seasonal fluctuations that

			restores the pipeline's cash flow patterns is expected.
Northern Natural Gas Co.	A-/Watch Pos/--	Taylor	Northern Natural Gas continues to focus on operations and increasing efficiency. Standard & Poor's expects continued solid stand-alone credit metrics. The overhang of a pending rate case has been removed as a settlement was reached, and substantial recontract risk has been removed with long-term extensions with Minnesota Gas and Northern States Power - Minnesota. Standard & Poor's expects to raise the rating to 'A' if parent company MidAmerican Energy Holdings is raised to 'BBB'.
Northwest Natural Gas Co.	A+/Stable/A-1	Venkataraman	Supportive regulation in Oregon, a high-growth service area, a favorable competitive position, and a growing FERC-regulated interstate storage business contribute to a strong business profile. There are no significant near-term debt maturities, with \$15 million in 2005 and \$8 million in 2006. However, capital expenditures are estimated to total between \$500 million and \$600 million over the next five years, and significant external funding will be required. Still, the company is expected to maintain an equity layer close to 50% and continue its strong financial performance.
NorthWestern Corp.	BB-/Positive/--	Jepsen	The mostly low-risk electric and gas business of NorthWestern is partly offset by a weak but improving financial profile, low-growth service territories, and historically unsupportive regulation in Montana. Because a large majority of NorthWestern's operating income and cash flow is from the Montana operations, an unfavorable Montana commission ruling, such as a rate reduction or disallowance of purchased power costs, could restrict cash flow. Projected profitability and cash flow protection measures, along with other financial metrics, are expected to be in line with the rating. In the near term, funds from operations is forecast to be sufficient for projected capital spending and dividends of roughly \$30 million. Further debt reduction and incremental capital spending is expected to be funded with discretionary cash flow and proceeds from any remaining asset sales.
NRG Energy Inc.	B+/Stable/--	Spangler	For the first quarter of 2005, results were slightly lower than the first quarter 2004, but NRG still posted robust gross margins. In the fourth quarter of 2004, NRG successfully refinanced it \$950 million in bank facilities, issued \$420MM convertible preferred and used proceeds to redeem \$375 million of 2nd priority notes, and sold various assets for proceeds of \$314 million and reduction of debt by \$989 million. NRG continues to hold certain assets for sale including James River and Itiquira. The company's cash flow continues to be exposed to the U.S. merchant power market and regulatory and political uncertainty. Relatively low debt-service coverage ratios under stress scenarios will continue.
NSTAR	A/Positive/A-1	Nikas	The company's credit quality benefits from a supportive regulatory environment and low operating risk transmission and distribution operations. The standard offer provision terminated in March 2005, bringing all customers under the basic service arrangement and materially reducing the potential for power cost deferrals. In addition, the recent securitization of \$675 million of contract termination costs and power cost deferrals provides support to credit quality.
Boston Edison Co.	A/Positive/A-1	Nikas	See NSTAR.
Cambridge Electric Light Co.	A/Positive/--	Nikas	See NSTAR.
Commonwealth Electric Co.	A/Positive/--	Nikas	See NSTAR.
NSTAR Gas Co.	A/Positive/--	Nikas	See NSTAR.
OGE Energy Corp.	BBB+/Stable/A-2	Silva	Cash flow metrics should improve, at least over the short term, as high commodity prices result in additional gathered volumes and higher processing margins at unregulated subsidiary, Enogex. Oklahoma Gas & Electric (OG&E), the company's regulated subsidiary, filed for an \$89 million rate



			increase in May 2005. The company has been operating under a 2002 rate settlement that reduced rates by \$25 million and ordered the company to acquire 400 MW in additional generating assets. In summer 2004, OG&E completed its acquisition of a 77% interest in the McClain facility for \$160 million. The current ratings assume that the pending rate case will result in the fair recovery of the McClain plant and other reliability investments.
Enogex Inc.	BBB+/Stable/--	Silva	See OGE Energy Corp.
Oklahoma Gas & Electric Co.	BBB+/Stable/A-2	Silva	See OGE Energy Corp.
ONEOK Inc.	BBB+/Watch Neg/A-2	Hsieh	Oneok's ratings are on CreditWatch negative following the company's May 10, 2005 announcement that it will acquire a natural gas liquids business from Koch Industries for about \$1.35 billion. Although the type of asset being acquired appears to be consistent with ONEOK'S business model and strategy, the rating could be pressured because the acquisition will be financed with 100% debt initially. Standard & Poor's will resolve the CreditWatch in the coming weeks as it obtain more details on the acquired assets and the company's financing strategy.
Otter Tail Corp.	BBB+/Negative/--	Jepsen	Otter Tail's business profile reflects the combination of a stable integrated electric utility division with the higher business risk strategy of owning a very diverse portfolio of competitive businesses that are smaller than their competitors and are managed in a decentralized manner. Otter Tail's investments in the manufacturing, health care, construction, trucking, and food-processing industries comprise roughly 40% of total assets, but contributed only 25% of consolidated operating income. Although the company expects the operating income contribution by the competitive businesses to increase over 50% by 2006, given the uneven performance of the various businesses over the last several years, this level may not be sustainable if reached. Financial measures are currently in line with the rating, and, after dividends and capital spending, the company has historically been cash flow positive, but not over the last several years. Given the relatively high dividend payout and increasing capital spending by the competitive businesses, liquidity will likely continue to be constrained as Otter Tail considers building a second coal unit at the Big Stone facility.
Pacific Gas & Electric Co.	BBB/Stable/--	Bodek	Long-term electricity and fuel procurement activities are ongoing and will define the utility's operational and financial profile. Financial performance remains exposed to volatile fuel and power procurement costs and the California Public Utilities Commission's response to material changes in utility costs. Also, expiration of California Department of Water Resources and qualifying facility contracts in coming years will heighten financial exposure related to power procurement. Therefore, further rating actions beyond the rating upgrade are not anticipated. The upgrade reflected the interplay between sound financial performance and actions by the regulator that are protective of bondholder interests.
PacifiCorp	A-/Watch Neg/A-2	Selting	The rating on PacifiCorp is on CreditWatch with negative implications following the May 2005 announcement that its parent, ScottishPower PLC, will sell the utility to MidAmerican Holdings Co. for \$9.4 billion, including \$5.1 billion in cash, and the assumption of \$4.3 billion in net debt and preferred stock. PacifiCorp's financial performance has been sagging, and the otherwise healthy financial performance of ScottishPower has compensated for the utility's otherwise weak financial metrics. The transaction is subject to regulatory review. Depending on how the transaction is structured, PacifiCorp's stand-alone credit quality may not be on par with its current ratings under ScottishPower. The utility faces sizable capital expenditures, with fiscal 2006 estimates at \$1 billion.

Peoples Energy Corp.	A-/Stable/A-2	Acar	The outlook is stable based on financial performance and projections provided by the company. Upside credit potential depends on the company's managing risk at the nonregulated businesses and sustaining its financial strength. The lawsuits filed separately by the Attorney General and City of Chicago in the first quarter of 2005 alleging that the company and its subsidiaries engaged in transactions for gas purchases that are in violation of certain consumer protection provisions do not currently affect the ratings. However, depending on the outcome of the lawsuits, as well as the outcome of the hearings regarding the prudence of gas purchases during the winter of 2000-2001, which have caused the Illinois Commerce Commission to raise similar issues, the ratings may be under pressure.
North Shore Gas Co.	A-/Stable/A-2	Acar	See Peoples Energy Corp.
Peoples Gas Light & Coke Co. (The)	A-/Stable/A-2	Acar	See Peoples Energy Corp.
PEPCO Holdings Inc.	BBB+/Negative/A-2	Messer	In May and June 2005, Pepco Holdings was active in the capital markets and successfully refinanced \$175 million senior secured notes at Potomac Electric Power Co. and \$100 million senior secured notes at Delmarva Power & Light Co. Furthermore, Pepco Holdings issued \$250 million in unsecured notes to refinance a portion of a \$300 million debt maturity at Conectiv. Standard & Poor's has since withdrawn its credit ratings on Conectiv due to the full repayment of the subsidiary's public debt and Pepco Holdings' intention to no longer issue debt securities at this entity.
Atlantic City Electric Co.	BBB+/Negative/A-2	Messer	See PEPCO Holdings Inc.
Delmarva Power & Light Co.	BBB+/Negative/A-2	Messer	See PEPCO Holdings Inc.
Potomac Capital Investment Corp.	BBB/Negative/-	Messer	See PEPCO Holdings Inc.
Potomac Electric Power Co.	BBB+/Negative/A-2	Messer	See PEPCO Holdings Inc.
Piedmont Natural Gas Co. Inc.	A/Stable/-	Janiak	The ratings and stable outlook on Piedmont reflect the successful completion of the integration of its North Carolina Natural Gas acquisition in 2004, continued healthy economic growth in the company's service areas, and responsive regulation in its jurisdictions. Importantly, Piedmont's attentiveness to credit quality supported by prudent management of its growth while maintaining sound credit protection measures, moderate use of debt leverage, and effective liability and liquidity management promote rating stability at the current level.
Pinnacle West Capital Corp. (PWCC)	BBB/Stable/A-2	Selling	The primary driver of PWCC's credit quality is Arizona Public Service (APS), the company's regulated electric utility that generates the bulk of consolidated net income. The negative outlook reflects a financial profile that is expected to be strained in the near term as a result of the modest retail rate increase that APS has negotiated as part of a settlement agreement that increases APS' rates by 4.21%. The expectation for a weaker financial profile is somewhat compensated by improvements in the consolidated business profile, which principally reflect Pinnacle West Energy Corp.'s exit of the merchant generation business through the sale of Silverhawk and the rate basing of its Arizona fleet as part of the APS settlement. The meager size of APS' rate increase and the fact that its power supply adjuster has tight limitations on annual upward rate adjustments imply that the utility will soon be faced with the need to file another rate case, particularly given the utility's growing reliance on natural gas generation.
Arizona Public Service Co.	BBB/Stable/A-2	Selling	See Pinnacle West Capital Corp.
PNM Resources Inc.	BBB/Stable/A-2	Waite	PNM Resources' financial profile will continue to depend on management's ability to lower operating costs to offset the rate reduction that is part of the five-year rate settlement. Standard & Poor's affirmation of its rating on PNM Resources after the company's announced \$1.024 billion

			acquisition of TNP Enterprises Inc. reflected both the anticipated credit profile of the new consolidated company as well as the company's settlement with New Mexico regulators. Under the terms of this settlement, PNM Resources cannot allow its credit ratings to fall below investment grade without losing the ability to pursue its strategy of wholesale energy expansion. To avoid this, the company committed either to sell sufficient equity or terminate the acquisition if necessary to keep its investment-grade ratings. The acquisition is now completed, the TNP Enterprises holding company debt has been repaid, and the credit quality of the consolidated company will now depend on the ability of PNM Resources to manage the retail business in New Mexico, the competitive retail business in Texas, and the wholesale business in the Western electric market.
Public Service Co. of New Mexico	BBB/Stable/--	Waite	See PNM Resources Inc.
Texas-New Mexico Power Co.	BBB/Stable/--	Waite	See PNM Resources Inc.
Portland General Electric Co. (PGE)	BBB+/Developing/A-2	Venkataraman	The developing outlook reflects the uncertainty over PGE's future ownership, the possibility that ratings could be raised, lowered, or affirmed, depending on the ultimate disposition of the utility. Ownership by Enron's creditors and a listing on a stock exchange will likely result in a stable outlook at the current rating level. The City of Portland has expressed its interest in creating a public utility. However, it is far from certain that Portland can come up with an offer that is acceptable to Enron or its creditors. Oregon Mutual Utility Development Inc. has proposed a debt-financed purchase of PGE and transformation of the utility into a consumer-owned utility patterned after mutual banks or mutual insurance companies.
PPL Corp.	BBB/Stable/--	Nikas	PPL's credit profile has benefited from higher energy prices and congestion revenues, despite the existence of some new all-requirements contracts that may expose PPL to load-shaping risks. While higher coal prices could affect margins, the company has hedged its coal supplies for 2005 and benefits from a significant escalator in its generation rate cap in 2006, which should mitigate the impact of higher fuel costs. Liquidity remains adequate, with about \$950 million of the \$1.3 billion credit lines available. PPL's debt leverage remains high at about 58%, while funds from operations interest coverage has improved to about 5x.
PPL Energy Supply LLC	BBB/Stable/--	Nikas	See PPL Corp.
PPL Electric Utilities Corp.	A-/Stable/A-2	Nikas	The higher credit rating for PPL Electric Utilities reflects its insulation from its weaker parent, PPL Corp., and its improving financial profile. The recent rate order allowing a rate increase of \$194 million, including the ability to recover all transmission costs, should benefit PPL Electric Utilities' credit profile.
Progress Energy Inc.	BBB/Negative/A-3	Hecht	Financial performance for the trailing 12 months is comparable to the previous year, which is below rating expectations. The resolution of storm costs recovery provides clarity with minimal disallowances but does not support a change in the outlook. The short-term focus remains on the pending actions by the Florida Public Service Commission regarding Progress Energy Florida's rate stipulation, which expires at Dec. 31, 2005, and execution of the debt reduction plan.
Carolina Power & Light Co.	BBB/Negative/A-3	Hecht	See Progress Energy Inc.
Florida Power Corp.	BBB/Negative/A-3	Hecht	See Progress Energy Inc.
Florida Progress Corp.	BBB/Negative/A-3	Hecht	See Progress Energy Inc.
PSEG Energy Holdings LLC	BB-/Negative/--	Bodek	The rating reflects the company's stand-alone creditworthiness and does not reflect any benefits of affiliation with financially a stronger corporate entity. It is Standard & Poor's view that Public Service Enterprise Group Inc. will not deploy cash generated at Public Service

			Electric & Gas Co. and PSEG Power LLC to infuse capital into PSEG Energy Holdings, which has experienced several failed investments. Preservation of credit quality hinges on several factors, including Exelon's future plans for this company, the extent to which proceeds of asset dispositions are applied to reduce debt, the aggregate quality of assets remaining in the portfolio following asset dispositions, and the outcome of an IRS investigation into tax deductions related to the company's lease portfolio. Tax deductions flowing from leasing transactions are an important component of the company's cash flow.
PSEG Power LLC	BBB/Watch Dev/--	Bodek	PSEG Power's nuclear units are expected to continue to exhibit diminished capacity factors in 2005 and it is expected that cash flows will suffer as the company pursues vessel head replacements and faces added operating and maintenance expenses related to other remedial actions. The Exelon merger has the potential to rehabilitate PSEG's nuclear units and introduce cost savings. If the merger does not come to pass within a reasonable time frame or if there is meaningful degradation of operating and financial results pending the merger, the ratings will be lowered.
Public Service Electric & Gas Co.	BBB/Watch Dev/--	Bodek	This regulated utility continues to benefit from pass-through mechanisms that insulate it from commodity price and demand volatility. Yet, by virtue of its affiliation with Public Service Enterprise Group's unregulated businesses, the utility's credit quality is exposed to several significant uncertainties, including the performance of PSEG Power's nuclear units and its ability to discharge PSEG Power's contractual provider-of-last-resort obligations.
Public Service Enterprise Group Inc.	BBB/Watch Dev/--	Bodek	Public Service Enterprise Group (Enterprise), a holding company, is exposed to volatile energy markets and operational issues that include sustained erratic performance at nuclear facilities and transmission constraints that frustrate economic operation of PSEG Power's assets. The CreditWatch listing with developing implications reflects the divergent credit paths facing the Enterprise companies. If the announced merger with Exelon is consummated as anticipated in early 2006, the credit quality of Enterprise and its subsidiaries should benefit from predicted synergies and from the company's integration into a larger entity with a stronger credit profile. However, if the merger does not come to pass or is perceived to be failing or there is further degradation in the performance at PSEG Power's nuclear assets pending closing, the ratings on the Enterprise companies are likely to be lowered. The potential for lower ratings is tied to the impairment of the company's financial performance by its diminished nuclear performance and transmission constraints, which hampered the company's ability to efficiently respond to nuclear outages and contributed to the erosion of financial margins. Exelon, as the operator of the largest nuclear fleet in the U.S., is viewed as having the ability to rehabilitate the reliability of PSEG's nuclear program.
Puget Energy Inc.	BBB-/Stable/--	Carrillo	In May 2005, Standard & Poor's revised the outlook on Puget Energy to stable from positive to reflect the expectation of only moderate rate relief by the Washington Utilities and Transportation Commission. Puget Energy had met expectations regarding the monetization of Infrastrux and the achievement of strong cash flow coverage in 2004. However, going forward, Puget will require equity infusions and will depend on timely rate relief to support its heavy capital requirements and plans to reduce debt leverage. Puget Sound Energy commenced construction on a 150 MW wind project for which it filed in June 2005 for cost recovery and has signed an agreement to start construction on a second 220 MW wind project later in the year.
Puget Sound Energy Inc.	BBB-/Stable/A-3	Carrillo	See Puget Energy Inc.
Questar Corp.	--/A-2	Silva	Affiliation with Questar Gas and Questar Pipeline continues to add stability to Questar Corp.'s consolidated cash flows

			despite some moderate regulatory challenges. The company's short-term credit profile benefits from currently strong cash flow generation at Questar Market Resources. As expected, peak cycle oil and gas prices contributed to higher earnings and funds from operations in first quarter 2005 as compared with first quarter 2004 despite lower-than-anticipated production at Questar Market Resources.
Questar Gas Co.	A-/Stable/--	Silva	The intracompany relationships among the Questar family of companies are characterized by a general free flow of funds and services. While affiliation with Questar Market Resources serves the company well in the current market, with oil and gas prices at a cyclical high, Standard & Poor's recognizes that over the long term, this affiliation exposes the company to elevated levels of business risk due to the riskier industry characteristics of the oil and gas sector.
Questar Market Resources Inc.	BBB+/Stable/--	Silva	Growing gas production, higher realized oil and gas prices, and higher gas processing margins have contributed to strong financial performance at Questar Market Resources over the last two years. However, production volumes for the first quarter 2005 were below expectations due to weather and rig-related drilling delays. Aggressive drilling of Pinedale reserves should enable the company to meet its original full-year production targets (112-114 billion cubic feet equivalent). Over the short term, Questar Market is expected to generate strong cash flows. Use of debt to fund nonregulated oil and gas exploration and production, gathering, and processing activities could negatively affect ratings.
Questar Pipeline Co.	A-/Stable/--	Silva	While affiliation with Questar Corp. and Questar Market serves Questar Pipeline well in the current commodity price environment, Standard & Poor's recognizes that over the long-term, Questar Market's nonregulated activities expose Questar Pipeline to elevated levels of business risk due to the cyclical and competitive pressures of the oil and gas sector. Also, continued delays in contracting the western segment of the Southern Trails pipeline add to business risk, delaying recovery of the company's \$51 million investment. Moreover, ongoing maintenance and marketing costs of the western segment continue to pressure margins.
Reliant Energy Inc.	B+/Stable/--	Spangler	Reliant still faces the challenges of operating in the wholesale and retail power market and high leverage. For the first quarter of 2005 Reliant posted fair results, in line with expectations. This year will be a difficult year for Reliant, as CenterPoint will complete its stranded cost transactions. At that time, Reliant will be subject to an adjustment in the price to beat. In November 2004, Standard & Poor's raised the corporate credit rating to 'B+'. During 2004, Reliant completed a \$4.25 billion refinancing, which evened out the maturity schedule, alleviated the cash traps at Orion and decreased interest expense marginally (\$55 million in 2004), realized \$270 million of annual cost savings, and sold Orion New York upstate assets for \$900 million, the proceeds of which were used to pay down Orion debt. Uncertain cash flows from the wholesale asset base are partially offset by the Texas retail business, which contributes about one-half of Reliant's cash flow. Reliant is still exposed to California legal and regulatory risk as it has not yet settled many pending cases in California.
Mid-Atlantic Power Holdings LLC	B+/Stable/--	Spangler	See Reliant Energy Inc.
Orion Power Holdings	B+/Stable/--	Spangler	See Reliant Energy Inc.
SCANA Corp.	A-/Stable/--	Janiak	South Carolina Electric & Gas, SCANA's largest subsidiary, generates most of the consolidated company's net income and cash flow (90% and 80%, respectively). Stable cash flow from regulated electric and gas businesses, constructive regulatory environments, and competitive business positions support credit quality. Management's commitment to credit quality and its ability to further reduce debt through the use of expected free cash flow in 2005,

			cash proceeds from the sale of its remaining interest in telecom assets, and favorable rate relief for its significant capital expenditure projects should allow the company to further strengthen its financial profile in the near term. Failure to do so would likely result in a revision of the outlook and/or ratings.
Public Service Co. of North Carolina Inc.	A-/Stable/A-2	Janiak	See SCANA Corp.
South Carolina Electric & Gas Co.	A-/Stable/A-2	Janiak	See SCANA Corp.
SEMCO Energy Inc.	BB-/Stable/--	Kennedy	Recent refinancings are expected to help reduce the company's interest expense and should improve some coverage metrics. However, the company will remain challenged in its ability to reduce its high level of debt. The company's strong storage position relieved pressure on its liquidity needs during this heating season.
San Diego Gas & Electric Co.	A/Stable/A-1	Venkataraman	The ratings reflect the consolidated profile of Sempra Energy. Regulation in California, which, among other things, mandates that the utilities maintain a 48% equity layer, provides sufficient insulation to separate the corporate credit ratings on the utilities from those of the parent and nonregulated subsidiaries.
Sempra Energy	BBB+/Stable/A-2	Venkataraman	The exceptionally strong performance by the trading business in 2004 is likely not sustainable, and Standard & Poor's zeroes out forecasts of trading revenues. The stable outlook reflects expectations for consistent and predictable financial performance at the utilities and Sempra Generation. Significant capital expenditures for the utilities, liquefied natural gas projects, and perhaps additional nonregulated generation assets will limit the amount of debt repayment. Sempra's cash coverage of interest and debt are expected to average about 4.5x and 29%, respectively. Debt to capitalization is expected to decline to under 50%. A negative development in the antitrust lawsuit is the most important near-term risk to the outlook and perhaps the rating, outside of direct business-related risks such as a large loss at Sempra Commodities. Upside potential is limited over the short to medium term, although successful execution of all projects, along with long-term contracted cash flows, could significantly strengthen Sempra's financial profile, moderate business risk, and provide upside potential.
Southern California Gas Co.	A/Stable/A-1	Venkataraman	See Sempra Energy Inc.
Sierra Pacific Resources (SRP)	B+/Negative/--	Venkataraman	The outlook could be revised to stable as the consolidated financial profile improves to levels consistent with the 'B+' rating and liquidity is no longer a concern. The regulatory climate has improved with the approval of the integrated resource plan for Nevada Power, decisions in 2004 allowing 100% deferred cost recovery for both utility subsidiaries, and commission comments about modifying the methodology to track gas prices more closely. Cash outflow pertaining to the Enron litigation is at least two years away. Liquidity has improved significantly with the utilities enjoying access to traditional bank revolving facilities since May 2004. Still, cash flow coverage of interest is expected to only remain between 2.0x and 2.5x over the next several years, mainly on account of large capital expenditures that will limit paydown of debt.
Nevada Power Co.	B+/Negative/--	Venkataraman	See Sierra Pacific Resources.
Sierra Pacific Power Co.	B+/Negative/--	Venkataraman	See Sierra Pacific Resources.
South Jersey Gas Co.	BBB+/Negative/--	Lee	The negative outlook on South Jersey Gas reflects the greater risk associated with the increased proportion of nonregulated operations at parent South Jersey Industries, as well as an increased proportion of capital spending on nonregulated pursuits. Furthermore, in the near to intermediate term, cash flow from operations are expected to fund only a portion of the company's capital budget and dividend payout, which will necessitate additional external

			<p>borrowing. Several factors could precipitate a downward rating action, including excessive use of debt to finance capital spending, lower-than-expected cash flow from growth projects, an increasing proportion of nonregulated investments, or adverse regulatory treatment at South Jersey Gas. Conversely, credit stability at the current rating level is possible through a combination of factors, including the realization of internally generated cash flow exceeding capital expenditures and dividend payout requirements, improved credit metrics including reduced debt levels, lower proportion of capital spending for nonregulated pursuits, and a greater portion of consolidated cash flow from the regulated gas utility.</p>
Southern Co.	A/Stable/A-1	Pratt	<p>Southern continues to demonstrate good profitability, with a return on capital in 2004 of about 9.3% on an adjusted basis. Cash flow protection is also good owing to regulated operations and a growing customer base. Retail revenues in 2004 grew more than 9% and retail sales rose more than 3%. Funds from operations (FFO) interest coverage on an adjusted basis was 5.2x in 2004 and is forecast to be around 4.3x through 2007, with trust preferreds treated fully as debt. If trust preferreds are treated as 100% equity, the FFO interest coverage was 6.3x in 2004 and would average around 5.4x through 2007. No major rate cases are planned until 2007. The FERC has not taken any formal action on Southern's market power assessment released in August 2004, but will not revise terms of contracts existing prior to the end of February 2005.</p>
Georgia Power Co.	A/Stable/A-1	Pratt	<p>See Southern Co. In December 2004, the Georgia Public Service Commission granted a 4.2% increase in base rates (\$198 million) from Jan. 1, 2005, well below the 7% (\$340 million) requested, but uncertainty about rates going forward is greatly reduced. The next filing is due in July 2007. Earnings will now be evaluated against a retail return on common equity range of 10.25% to 12.25%, which is generally consistent with previous ROEs of 12.07% in 2003 and 12.56% in 2002 and which should help Southern meet its earnings growth targets. The retail ROE was 12.54%.</p>
Alabama Power Co.	A/Stable/A-1	Pratt	See Southern Co.
Gulf Power Co.	A/Stable/--	Pratt	See Southern Co.
Mississippi Power Co.	A/Stable/A-1	Pratt	See Southern Co.
Savannah Electric & Power Co.	A/Stable/--	Pratt	See Southern Co.
Southern Electric Generating Co.	A/Stable/A-1	Pratt	See Southern Co.
Southern Power Co.	BBB+/Stable/--	Pratt	<p>Southern Power had good financial performance in 2004, with an funds from operations interest coverage ratio of 3.3x, well above earlier forecasts of about 3x coverage. The FERC has not completed its Section 203 investigation of Southern Co. and Southern Power's perceived market power in the Southern's service territory, but the FERC will not revise terms of Southern Power's wholesale contracts existing prior to the end of February 2005. Unfavorable to credit is Southern Power's recent purchase of the 680 MW Oleander peaking power plant near Cocoa, Fla. from Constellation Energy Group Inc. This purchase results in peaking assets representing about 27% of total generation assets. Oleander is fully contracted through 2007 and 75% contracted through 2009. Favorably, Southern Power has made gains in arranging new contracts for capacity coming off of contract in 2010.</p>
Southern Star Central Corp.	BB/Watch Dev/--	Lee	<p>The ratings are on CreditWatch with developing implications following the company's announcement that the firm is exploring strategic alternatives, including a master limited partnership, IPO, sale, or other unspecified alternatives for Southern Star Central Gas Pipeline. Standard &amp; Poor's expects to resolve the CreditWatch listing after a review of the company's decision on its course of action, including potential changes in governance, strategic direction,</p>

			financial profile, or other credit metrics, and their ultimate impact on credit quality.
Southern Star Central Gas Pipeline Inc.	BB/Watch Dev/—	Lee	See Southern Star Central Corp.
Southern Union Co.	BBB/Negative/—	Waite	Southern Union acquired pipeline assets from Enron through a joint venture with GE Energy Financial Services Inc. The acquisition debt is nonrecourse and is not included in Standard & Poor's assessment of Southern Union's rating, although in five years Southern Union will buy out GE. At that time the rating is likely to be determined based on the financial strength of all the assets owned by Southern Union. The company has successfully funded the \$590.5 million acquisition with \$483 million of common equity and \$100 million of convertible debt. If the financial metrics of the consolidated companies, Southern Union Co. and Panhandle Eastern Pipeline, are in line with 'BBB' benchmarks by the end of 2005, the outlook will likely be revised to stable.
Panhandle Eastern Pipe Line LLC	BBB/Negative/—	Waite	See Southern Union Co.
Southwest Gas Corp.	BBB-/Stable/—	Watt	Recent rate cases in Nevada and California have reduced earnings volatility associated with milder weather in 2005. However, a rate case on file in Arizona that seeks to improve returns and enhance rate design is a prevailing rating concern. Customer growth of 5% per year continued in the most recent quarter and requires substantial capital expenditures over the intermediate term. Internal cash flow after common dividends is projected to fund about 60% of total capital expenditures. Credit measures remain solid for the rating.
Tampa Electric Co.	BBB-/Stable/A-3	Tsocanos	Cash flow is projected to return to more typical levels in 2005 after an unusually active hurricane season and the effect of fuel cost recovery timing resulted in lower than expected cash flow in 2004. The utility recovers a portion of hurricane costs through a storm reserve mechanism, and the remainder is capitalized. Tampa Electric has largely completed its required environmental spending, though the company must add some incremental peaking capacity beginning in 2006. The utility maintains a rating two notches above its parent based on the view that the utility's credit profile is unlikely to suffer further deterioration from the parent's activities.
TECO Energy Inc.	BB/Stable/B-1	Tsocanos	TECO Energy has largely completed its sale of merchant power assets and is refocusing on its core regulated business. Now that the Union and Gila River plants were transferred to their bank group through a voluntary bankruptcy process in May 2005, and the sale of the Dell plant is expected to close in the third quarter, only McAdams remains of the unregulated power portfolio. The company intends to build cash and refinance opportunistically ahead of sizable 2007 maturities. Consolidated cash flow, while improved, is dependent on synthetic fuel operations for about 40% of expected total in 2005 cash flow, and is vulnerable to high oil prices. Debt incurred to pursue a merchant strategy and residual unregulated activities continue to be a drag on financial performance and credit quality.
Texas Genco LLC	BB-/Stable/—	Taylor	Standard & Poor's expects relatively stable financial performance and substantial debt reduction over the next four to five years due to hedges in place at Texas Genco. The pending IPO will not affect the rating on its own, but if a more aggressive financial policy results, this will increase the risk of a downgrade. In the near term, variability will be driven primarily by facility operations and the ability of management to control operating costs. Over the longer term, credit will be driven by the market dynamics of the Electric Reliability Council of Texas.
Tucson Electric Power Co.	BB/Stable/B-1	Selting	The ratings on Tucson Electric Power, a wholly owned subsidiary of UniSource Energy Corp. (unrated), reflect the highly leveraged financial profile and the satisfactory



			consolidated business profile. Very high leverage remains the most critical credit concern, with consolidated adjusted debt to total capitalization at 76.8% as of March 31, 2005. The ability of the company to achieve its consolidated projections and insure that its cash coverage ratios remain within the Standard & Poor's benchmarks will be critical to ratings stability. The company is in the midst of a rate review that it filed in June 2004. Due to a rate ceiling imposed as part of a 1999 settlements, the rates may not be increased until after 2008 but could be lowered as part of the pending review.
TXU Corp.	BBB-/Stable/--	Hsieh	The June downgrade reflected concerns that the company's strong earnings per share growth targets and willingness to use debt leverage to bolster its stock price may be a source of continued tension with lenders' interests. Though TXU's cash flow continues to benefit greatly from the persistent rise in gas prices in the past two and half years, concerns remain about the eventual fall in gas prices and the impact it would have on the residential retail operation.
TXU Electric Delivery Co.	BBB-/Stable/--	Hsieh	See TXU Corp.
TXU Energy Co. LLC	BBB-/Stable/--	Hsieh	See TXU Corp.
UGI Utilities Inc.	BBB-/Negative/--	Kennedy	UGI Utilities continues to produce strong results. However, parent UGI Corp.'s expansion into unregulated foreign propane distribution businesses has introduced more risk into the company's overall profile. Growth of UGI Corp.'s nonregulated businesses should be moderate. UGI Utilities' ratings may be lowered if the consolidated entity fails to deliver projected cash flow or future growth at the consolidated entity causes the proportion of higher-risk businesses to exceed Standard & Poor's expectations.
United Waterworks	A-/Stable/--	Lee	The ratings on United Waterworks incorporate the company's credit quality with that of ultimate parent, Suez S.A. (A-/Stable/A-2), and the greater risk profile of intermediate parent, United Water Inc., where nonregulated activities have resulted in significant losses. Parent United Water also faces the substantial cost of cleanup for MTBE, a gasoline additive and potential carcinogen that has been detected in the company's water systems. To recover these costs, United Water has joined other affected water utilities in lawsuits against MTBE makers including Exxon Mobil, Amerada Hess, and Sunoco. However, provisions of the energy bill currently under debate by Congress include a "safe harbor" waiver, which could protect MTBE makers by retroactively nullifying all MTBE defective product liability lawsuits filed since September 2003, including United Water's. Notably, United Water's regulatory environment has largely been favorable for credit quality, which bodes well for potential MTBE cost recovery, if necessary. However, even if recovery is eventually granted by regulators, the process could bring about regulatory lag and necessitate increased borrowing in the interim, potentially harming credit quality.
United Water New Jersey	A-/Stable/--	Lee	See United Waterworks.
Vectren Corp.	A-/Stable/--	Acar	All of Vectren's regulated gas utilities finalized their rate cases. Overall, the settlements for the gas distribution businesses were favorable, providing for rate increases that are in line with Standard & Poor's expectations, including an ROE that is comparable with the national average of 10.5% and a new rate design that includes a larger fixed monthly customer charge, which is intended to address to some extent weather-related earnings volatility. Unregulated activities continue to provide positive income, and mostly support regulated operations. The negative outcome of the jury trial between ProLiance (50% controlled subsidiary of Vectren) and the City of Huntsville, Ala. against ProLiance is not expected to affect Vectren's credit rating.
Indiana Gas Co. Inc.	A-/Stable/--	Acar	See Vectren Corp.

Southern Indiana Gas & Electric Co.	A-/Stable/-	Acar	See Vectren Corp.
Vectren Utility Holdings Inc.	A-/Stable/A-2	Acar	See Vectren Corp.
Westar Energy Inc.	BB+/Positive/-	Eiseman	Westar has completed its debt restructuring commitment made to the Kansas Corporation Commission (KCC) and has returned to being a pure vertically integrated electric utility. On May 2, 2005, Westar filed a general rate case for an \$84.1 million rate hike premised upon an 11.5% return on equity. The filing is one of the final steps of the plan agreed to with the KCC. A commission decision is expected by the end of 2005. The positive outlook recognizes the significant actions management has taken to strengthen the company's financial condition and reduce its business risk. However, to make the transition to investment grade, Westar must achieve and sustain cash flow measures that are solidly investment grade and receive a reasonable rate decision in its pending rate case. The failure to strengthen financial parameters, coupled with a mediocre rate order would result in an outlook revision back to stable.
Kansas Gas & Electric Co.	BB+/Positive/-	Eiseman	See Westar Energy Inc.
WGL Holdings Inc.	AA-/Negative/A-1	Messer	In April 2005, WGL Holdings increased its cost estimates concerning its Prince George's County distribution system remediation program to \$87 million from its original estimate of \$75 million. Furthermore, the company disclosed that paving requirements could increase costs by up to an additional \$50 million. It is currently unknown whether the Maryland Public Service Commission will allow WGL cost recovery through rates. Standard & Poor's anticipates that WGL will use a combination of debt financing and internally generated cash flow to finance these additional expenditures through 2007 and that financial metrics and discretionary cash flow are likely to modestly weaken over the next several years.
Washington Gas Light Co.	AA-/Negative/A-1	Messer	See WGL Holdings Inc.
Williams Cos. Inc. (The)	B+/Stable/-	Wolinsky	If Williams continues to meet its forecasts, the outlook could be revised to positive in the near term and the rating could be raised over the intermediate term. However, if cash spending at its power segment is considerably higher than expectations or financial ratios fall considerably below expectations, the outlook could be changed to negative.
Northwest Pipeline Corp.	B+/Stable /-	Wolinsky	See The Williams Cos. Inc.
Transcontinental Gas Pipe Line Corp.	B+/Stable /-	Wolinsky	See The Williams Cos. Inc.
Wisconsin Energy Corp.	BBB+/Negative/A-2	Jepsen	Wisconsin Energy's strengths and very supportive regulation are tempered by the risks from its well-above-average historical levels of capital spending through 2011, including the construction of two gas-fired combined cycle units, possibly two pulverized coal-fired units, substantial environmental improvements, and other transmission and distribution projects. Because the company intends to partly fund the capital spending with internal cash flow, it will be free operating cash flow negative, after which dividends must still be paid and will also require new borrowings. Financing must be prudent for the company's credit profile to be maintained and access to capital preserved. The company's financial metrics improved in 2004 as debt and preferred stock were retired from asset sales, but adjusted funds from operations to debt is weak for the rating and not forecast to improve until 2006. Assuming all planned construction takes place, which is currently uncertain, the company's adjusted financial measures are expected to continue to be mixed for the rating and improvement in cash flow protection measures expected in future years is highly dependent on continuing supportive rate treatment as historically received to recover the high levels of capital spending.
Wisconsin Electric Power Co.	A-/Negative/A-2	Jepsen	See Wisconsin Energy Corp.
Wisconsin Gas LLC	A-/Negative/A-2	Jepsen	See Wisconsin Energy Corp.

WPS Resources Corp.	A/Negative/A-1	Jepsen	The strength and cash flow stability of WPS Resources' utilities, along with very supportive regulation, are tempered by the risks from well-above-average historical level of capital spending, including the construction of two coal-fired units, the Wausau to Duluth transmission line, substantial environmental improvements, and other transmission and distribution projects. At least through 2007, Standard & Poor's expects the company to be free operating cash flow negative, after which dividends must still be paid, thereby requiring external debt and equity financing. In addition to being exposed to construction schedule and budget risks, financing of capital spending must be prudent. The utility will also continue to require supportive regulation through the heavy capital spending phase. WPS Resources' unregulated operation, WPS Energy Services, is exposed to counterparty credit risk since it provides wholesale and retail power and gas marketing services and has disproportionately high liquidity needs relative to its earnings contribution. The marketing subsidiary relies entirely on WPS Resources for collateral support provided through parental guarantees with counterparties and liquidity that is provided primarily through working capital.
Wisconsin Public Service Corp.	A+/Negative/A-1	Jepsen	See WPS Resources Corp.
Xcel Energy Inc.	BBB/Stable/--	Waite	Xcel's subsidiaries continue to lower overall costs by centralizing and streamlining joint operating activities. A settlement related to the least cost plan in Colorado supports Public Service of Colorado's credit by recognizing that equity should be at least 56% of capital to offset purchased power obligations and that future plant construction costs should be included in rate base on a current basis. Over the next few years the Xcel subsidiaries will be filing for rate increases to recover existing costs of operation as well as the construction of new plant and upgrade of existing plants. These rate increases and continued regulatory support of the utilities' credit profiles are important factors in maintaining the current credit rating.
Northern States Power Co.	BBB/Stable/--	Waite	See Xcel Energy Inc.
Northern States Power Wisconsin	BBB+/Stable/--	Waite	See Xcel Energy Inc.
Public Service Co. of Colorado	BBB/Stable/A-2	Waite	See Xcel Energy Inc.
Southwestern Public Service Co.	BBB/Stable/--	Waite	See Xcel Energy Inc.
The York Water Co.	A-/Stable/--	Lee	York continues to benefit from regulation by the Pennsylvania Public Utilities Commission that is supportive of credit quality, a predominantly residential customer base, above average customer growth, and a solid operational track record. However, York's small size and geographic isolation continue to challenge the company. In 2004, cash flow from operations of about \$7.7 million was insufficient to fund about \$26 million of capital expenditures, mostly related to the Susquehanna River Pipeline Project, which was necessary to increase water supply due to a drought in the region. During the first quarter of 2005, the company also announced its acquisition of three nearby water systems for a combined purchase price of \$2.3 million. Upward rating potential in the near term is unlikely given the company's lack of free cash flow and substantial additional capital expenditures expected in 2005-2006.
*Ratings are as of June 28, 2005.			

## CreditWatch

Table 2 CreditWatch Listings	

Issuer	CreditWatch implications	Date*	Reason
Cinergy Corp.	Negative	May 10, 2005	The rating action on Cinergy reflects Standard & Poor's preliminary assessment that on the closing of the transaction with Duke Energy Corp., the company's credit quality will be assessed on a consolidated basis, indicating lack of regulatory insulation or meaningful restrictions on the flow of cash within the company. As a result, Standard & Poor's expects that the ratings on Cinergy will likely be equalized with the ratings on Duke Energy, reflecting the same level of default risk.
Cincinnati Gas & Electric Co.	Negative	May 10, 2005	See Cinergy Corp.
PSI Energy Inc.	Negative	May 10, 2005	See Cinergy Corp.
Union Light Heat & Power Co.	Negative	May 10, 2005	See Cinergy Corp.
Duke Energy Corp.	Negative	May 10, 2005	Standard & Poor's expects that the ratings on Duke Energy, post merger, are more likely to remain at current levels than be lowered, assuming no material increase in business risk or weakening in the consolidated financial profile. This is because the consolidated business risk profile should benefit from operating and regulatory diversity, generally supportive regulatory regimes, and an increased asset base with competitive power costs. Nevertheless, Standard & Poor's notes that the nonregulated operations, particularly electricity and gas trading and marketing, could become a significant user of liquidity, including cash on hand and available credit facilities, under certain adverse market and credit conditions. Furthermore, the merged companies could be challenged to fully exploit the targeted synergies of the merchant generation assets in the Midwest.
Duke Capital LLC	Negative	May 10, 2005	See Duke Energy Corp.
Duke Energy Trading and Marketing LLC	Negative	May 10, 2005	See Duke Energy Corp.
PanEnergy Corp.	Negative	May 10, 2005	See Duke Energy Corp.
Texas Eastern Transmission LP	Negative	May 10, 2005	See Duke Energy Corp.
MidAmerican Energy Holdings	Positive	May 25, 2005	The positive CreditWatch listing for MidAmerican reflects Standard & Poor's expectation that its acquisition of PacifiCorp will be financed primarily with the infusion of equity from MidAmerican's ultimate parent, Berkshire Hathaway Inc., a practice consistent with previous acquisitions.
Northern Natural Gas Co.	Positive	May 25, 2005	See MidAmerican Energy Holdings.
Oneok Inc.	Negative	May 10, 2005	Although the type of asset being acquired appears to be consistent with ONEOK'S business model and strategy, the rating could be pressured because the acquisition will be finance initially with 100% debt.
PacifiCorp	Negative	May 25, 2005	The CreditWatch listing reflects the fact that the current 'A-' corporate credit rating on PacifiCorp is based on ScottishPower's consolidated credit profile, whose solid financial performance has compensated for the U.S. utility's weaker stand-alone metrics.

\*Dates represent the period from April 29, 2005 to June 28, 2005, covered by this report card.

## Outlook Changes

Table 3 Outlook Changes				
Issuer	To	From	Date*	Reason
Energy East Corp.	Stable	Negative	June 17, 2005	The change in outlook is primarily due to an improving financial profile and a reduction in business risk from the sale of the Ginna nuclear power plant and various unregulated subsidiaries. Energy East's low level of operating risk, geographic diversity, and supportive regulatory environment characterizes its strong business profile, which is scored a '3' (business profiles are categorized from '1' (excellent) to '10')

				scored a '3' (business profiles are categorized from '1' (excellent) to '10' (vulnerable)). Energy East's utility subsidiaries are predominately electric and gas transmission and distribution companies, which are less exposed to operating risk than integrated utilities. Energy East's service territories span from central New York to southern Maine. The market diversity strikes a balance between the limited growth opportunities in rural upstate New York and the more densely populated, affluent markets served in Connecticut. In addition, despite exposure to competition, Energy East's regulated utilities often benefit from being the incumbent service provider in many of its markets.
Central Maine Power Co.	Stable	Negative	June 17, 2005	See Energy East Corp.
Connecticut Natural Gas Corp.	Stable	Negative	June 17, 2005	See Energy East Corp.
New York Electric & Gas Corp.	Stable	Negative	June 17, 2005	See Energy East Corp.
Rochester Gas & Electric Corp.	Stable	Negative	June 17, 2005	See Energy East Corp.
Southern Connecticut Gas Co.	Stable	Negative	June 17, 2005	See Energy East Corp.
First Energy Corp	Positive	Stable	May 16, 2005	The outlook revision followed the successful restart of the Perry and Beaver valley nuclear stations after their respective refueling outages. The ratings on FirstEnergy reflect the consolidated creditworthiness of the utility holding company and its seven electric utility subsidiaries. The corporate credit rating reflects the benefits of supportive regulation and a fleet of low-cost, baseload power generation in Ohio, low-risk transmission and distribution operations in New Jersey and Pennsylvania, and rate certainty in Ohio. Strong free cash flow generation, good liquidity, and an improving financial profile are other strengths. These positive factors are tempered by an overall below-average business risk profile relative to its peers. Business risks include a below-average regulatory relationship in New Jersey, lingering concerns about operational management, and pending investigations. The company still carries high, albeit declining, debt levels as reflected in its low funds from operation to debt ratio.
Cleveland Electric Illuminating Co.	Positive	Stable	May 16, 2005	See First Energy Corp.
Jersey Central Power & Light Co.	Positive	Stable	May 16, 2005	See First Energy Corp.
Metropolitan Edison Co.	Positive	Stable	May 16, 2005	See First Energy Corp.
Ohio Edison Co.	Positive	Stable	May 16, 2005	See First Energy Corp.
Pennsylvania Electric Co.	Positive	Stable	May 16, 2005	See First Energy Corp.
Pennsylvania Power Co.	Positive	Stable	May 16, 2005	See First Energy Corp.
Toledo Edison Co.	Positive	Stable	May 16, 2005	See First Energy Corp.
Puget Energy Inc.	Stable	Positive	May 13, 2005	The outlook revision to stable from positive reflected the expectation of only moderate rate relief by the Washington Utilities and Transportation Commission. Puget Energy had met our expectations regarding the monetization of Infrastrux and the achievement of strong cash flow coverage in 2004. However, going forward, Puget will require equity infusions and will depend on timely rate relief to support its heavy capital requirements and plans to reduce debt leverage. Puget Sound Energy commenced construction on a 150 MW wind project for which it filed in June 2005 for cost recovery, and has signed an agreement to start construction on a second 220 MW wind project later in the year.
Puget Sound Energy Inc.	Stable	Positive	May 13, 2005	See Puget Energy Inc.
*Dates represent the period from April 29, 2005 to June 28, 2005, covered by this report card.				

## Rating Changes

Table 4 Rating Changes				
Issuer	To	From	Date*	Reason
<b>New ratings</b>				
None.				
<b>Upgrades</b>				
Allegheny Energy Inc.	BB-	B+	May 9, 2005	The upgrade reflected the company's progress in debt reduction using proceeds from asset sales and free cash flow and through accelerated debt-to-equity conversion. Also supporting the upgrade is management's proactive approach in seeking regulatory relief and implementing cost reduction and reliability improvement initiatives.
Allegheny Energy Supply Co. LLC	BB-	B+	May 9, 2005	See Allegheny Energy Inc.
Monongahela Power Co.	BB-	B+	May 9, 2005	See Allegheny Energy Inc.
Potomac Edison Co.	BB-	B+	May 9, 2005	See Allegheny Energy Inc.
West Penn Power Co.	BB-	B+	May 9, 2005	See Allegheny Energy Inc.
Covanta Energy Corp	B+	B	June 28, 2005	The rating actions follow the completion of Covanta's acquisition of American Ref-Fuel Holdings Corp., the parent of MSW I and MSW II, from DLJ Merchant Banking Partners and its affiliated coinvestors and AIG Highstar Capital L.P. and certain affiliates. Covanta's core business position would be adversely affected if it took any action that would negatively affect project cash flows, including debt service on its nonrecourse project-level municipal debt.
El Paso Corp.	B	B-	June 27, 2005	The upgrade recognize the considerable progress that the company has made in reducing exposure to unregulated operations and improving liquidity. Proceeds from asset sales and successful issuance of \$750 million of convertible preferred stock in April put the company in a much-improved position to meet its challenging near-term maturities, although refinancing risk remains a material concern.
ANR Pipeline Co.	B	B-	June 27, 2005	See El Paso Corp.
Colorado Interstate Gas Co.	B	B-	June 27, 2005	See El Paso Corp.
El Paso Natural Gas	B	B-	June 27, 2005	See El Paso Corp.
Southern Natural Gas Co.	B	B-	June 27, 2005	See El Paso Corp.
Tennessee Gas Pipeline Co.	B	B-	June 27, 2005	See El Paso Corp.
Texas-New Mexico Power Co.	BBB	BB+	June 6, 2005	The rating on Texas-New Mexico Power now mirrors the corporate credit rating on PNM Resources Inc. and its electric and gas utility subsidiary, Public Service Co. of New Mexico. The ratings on PNM Resources reflect its solid business position, which is supported by the generally stable earnings of the regulated electricity and gas distribution systems of both its utility subsidiaries as well as by reasonably good growth in their respective service territories.
<b>Downgrades</b>				
Calpine Corp.	B-	B	May 9, 2005	The ratings on Calpine were lowered because the company must continue to rely on asset sales and contract monetizations to meet its interest payments and other fixed obligations in 2005 and 2006. In addition, the rating action is based on uncertain prospects for improvements in power markets, making it unlikely that Calpine will be able to meet these obligations with internal cash flow generation. Although Calpine alleviated many of its liquidity issues regarding its 2003-2004 debt maturities through successful refinancing, asset sales, and monetizations, liquidity will remain a credit concern because Calpine's new debt instruments restrict its ability to issue debt and sell assets.
Calpine Generating Co. LLC	B-	B	May 9, 2005	See Calpine Corp.
Calpine Construction Finance	B-	B	May 9, 2005	See Calpine Corp.

Co. LP				
Central Vermont Public Service Corp.	BB+	BBB-	June 10, 2005	The downgrade was in response to an April 2005 Vermont Public Service Board rate order requiring Central Vermont to provide customers with a rate refund of approximately \$6 million in June 2005 and to reduce rates by 2.75% effective April 1, 2005. The rate order represents an adverse shift in the company's regulatory environment, which heightens its business risk over the foreseeable future. The mandated rate refund and decrease also weaken the company's credit-protection measures. Lastly, the rate order's impact on cash flows limits the company's ability to generate positive discretionary cash flow, which is a material difference from previous years.
Energen Corp.	BBB+	A-	June 28, 2005	The ratings on Energen reflect the consolidated credit profile of the company and its subsidiaries, Energen Resources Corp. and Alabama Gas Co. While strong commodity prices have bolstered consolidated cash flows significantly over the last three years, the company maintains a higher tolerance for debt than appropriate for an 'A' category company with material exposure to the oil and gas exploration and production sector. For example, the company targets a 60% equity-to-capital ratio, which is low for a company with above-average business risk. Increased participation in the oil and gas sector exposes the company to a competitive and cyclical industry with large capital requirements.
Alabama Gas Corp.	BBB+	A-	June 28, 2005	See Energen Corp.
Middlesex Water Co.	A-	A	June 22, 2005	The downgrade reflects continued heavy capital spending needs at Tidewater Utilities Inc., the regulatory uncertainty surrounding new wastewater operations at Tidewater Environmental Services Inc. (TESI), a historically high dividend payout, and a moderate financial profile. Tidewater's capital expenditure needs are high and expected to increase going forward, although its regulatory environment appears to have stabilized. Regulatory treatment for TESI, which is expected to begin operations this year, remains uncertain given recently passed legislation in Delaware newly regulating wastewater facilities. Middlesex's moderate financial profile, including a high dividend payout and weak funds from operations to total debt measures, is more commensurate with the 'A-' rating.
Northeast Utilities	BBB	BBB+	May 27, 2005	The rating action reflected Standard & Poor's view that the credit-protection measures for Northeast Utilities (NU) are weak and will continue to deteriorate until the costs of a major construction program are recovered in rates. Connecticut Light & Power (CL&P) is engaged in a major construction plan to expand and upgrade its transmission and distribution network in Connecticut. This will require the subsidiary to issue about \$200 million annually from 2005 to 2009. However, CL&P will not begin to recover the costs related to this program until sometime in 2007 to 2008, when the transmission investments are expected to begin to enter service. The result will be a weakened financial profile for many years. Furthermore, although NU has announced its intention to sell certain of its unregulated operations, it is still subject to execution risk regarding the sale and remains exposed to the generation and retail supply businesses, which both represent high business risk.
Connecticut Light & Power Co.	BBB	BBB+	May 27, 2005	See Northeast Utilities
Public Service Co. of New Hampshire	BBB	BBB+	May 27, 2005	See Northeast Utilities
Western Massachusetts Electric Co.	BBB	BBB+	May 27, 2005	See Northeast Utilities
Yankee Gas Services Co	BBB	BBB+	May 27, 2005	See Northeast Utilities
TXU Corp.	BBB-	BBB	June 14, 2005	Standard & Poor's concluded that even though TXU's accomplishments selling its nonperforming assets and restructuring its debt over the past year and a half are highly beneficial to all stakeholders, TXU's willingness to use debt leverage to bolster its stock price and its strong earnings per share growth targets may be a source of continued tension with lenders' interests. Given the heavy focus on equity holders, Standard & Poor's current opinion is that a 'BBB-' corporate credit rating is more appropriate for the company. Standard & Poor's also revised its business risk profile on the company to '7' from '5' (business profiles are categorized from '1' (excellent) to '10' (vulnerable)). The rating and business risk profile revisions follow a complete review of the company.
TXU Electric Delivery Co	BBB-	BBB	June 14, 2005	See TXU Corp.
TXU Energy Co. LLC	BBB-	BBB	June 14, 2005	See TXU Corp.
<b>Withdrawn ratings</b>				
Conectiv	NR	BBB+	June 7, 2005	
TNP Enterprises	NR	BB+	June 6, 2005	
*Dates represent the period from April 29, 2005 to June 28, 2005, covered by this report card.				

## Rating Trends

## Selected Articles

Table 5 Previously Published Articles	
Article title	Publication date
Calpine Generating Co.'s Valuation: An Exercise In Notching	May 18, 2005
Credit FAQ: The Duke Energy And Cinergy Merger	May 19, 2005
How Returns On Equity Factor Into U.S. Utilities Creditworthiness	June 16, 2005
MTBE Legislation Could Affect U.S. Water Utilities Credit Quality	May 16, 2005
Need For U.S. Utility Refinancing Plummets Since Critical Days Of 2002	June 21, 2005
Peer Comparison: Eight U.S. Utilities' Returns On Equity	June 27, 2005
S&P Survey Highlights Weakness In Liquidity Risk Management In The U.S. Energy Industry	May 12, 2005
Why U.S. Electric Utility Mergers Jeopardize The Balance Sheet	June 14, 2005

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## WACHOVIA CAPITAL MARKETS, LLC EQUITY RESEARCH DEPARTMENT

### Utilities: The Dark Side Of "Back To Basics"

#### Utility Stocks Could Begin Trading Like Utility Stocks Again

#### Inflation, High Interest Rates Mean EPS Attrition, Lower P/E's

April 5, 2005

##### Key Points

- **Utility Companies Have Begun Behaving Like Utility Companies Once Again.** "Back to Basics" has been the popular industry theme since the collapse of the merchant power sector. The recovery phase of that strategy is largely complete, as noncore businesses have been divested and balance sheets have been repaired. Companies are once again investing in their utility operations to grow earnings. Capital spending for new generating plants, environmental compliance, customer growth, and to improve the reliability of an aging infrastructure is on the rise. Higher capital spending translates into rate base growth and rate base growth means earnings growth, as long as the regulators are willing to provide timely and adequate increases in rates.
- **Utility Stocks Have Not Been Behaving Like Utility Stocks, However.** From the late 1980s through the 1990s, utility stocks traded in a nearly perfect inverse relationship with long-term interest rates. With the rapid rise and fall of the merchant power sector beginning in 2001, that relationship reversed. Interest rates declined in 2001 and 2002, and utility stock prices dropped as well. Rates have, on balance, been on the rise since mid-2003 with a growing economy and rapidly rising commodity prices. Utility stocks, which have traditionally been interest rate sensitive, have been among the top performing sectors and are trading at record high valuations.
- **The "Dark Side" Of The Back To Basics Strategy** is that a rising capital spending program during a period of rising inflation and interest rates will begin to affect earnings growth, which could then begin to affect P/E multiples. As interest rates rise, the cost of debt for a new plant and to refinance maturing obligations increases. Higher plant costs, operating expenses, fossil fuel prices, and investments to meet environmental regulations all put upward pressure on rates to customers. Without rate relief, earnings will suffer until a rate case can be prepared, filed, and litigated. Lower earnings growth rates combined with higher market yields can lead to lower P/E multiples.
- **Utility Stocks Could Fall 10-20% If The Historical Connection To Interest Rates Returns.** Interest rates have been on the rise and expectations of yields on long-term U.S. Treasury bonds above 5% are common. The UTY Utility Stock Index (PHLX: UTY), a widely used indicator of utility stock values, is trading around 400, near its all-time high. Prior to 2001, the last time the yield on 10-year U.S. Treasury bonds was at 5%, the UTY traded between 325 and 350, or 10-20% below current prices.
- **Our Analysis Suggests A Neutral To Underweight Position For The Group.** We see these conditions developing over a period of time. We believe investors should focus their holdings in the sector to those companies that have minimal exposure to regulatory lag or are able to offset earnings attrition within their regulated businesses with strong nonregulated operations. These include Constellation Energy (CEG, \$53.65, Market Perform), Dominion Resources (D, \$76.27, Market Perform), Entergy (ETR, \$72.60, Market Perform), FPL Group (FPL, \$40.57, Market Perform), and Southern Company (SO, \$32.15, Market Perform).

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Please see page 13 for rating definitions, important disclosures and required analyst certifications.

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ATTACHMENT DEB-6  
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**Discussion**

"Back to Basics" has been the popular industry theme since the collapse of the merchant power sector. The recovery phase of that strategy is largely complete, as noncore businesses have been divested and balance sheets have been repaired. Companies are once again investing in their utility operations to grow earnings. Capital spending for new generating plants, environmental compliance, customer growth, and to improve the reliability of an aging infrastructure is on the rise. Higher capital spending translates into rate base growth and rate base growth means earnings growth, as long as the regulators are willing to provide timely and adequate increases in rates.

**Interest Rates And Utility Stocks--The 1990s**

From the late 1980s through the 1990s, utility stocks traded in a nearly perfect inverse relationship with long-term interest rates. Utility stocks have traditionally been relied on for their dividend yields and relative safety. As yields on other income-oriented investments rise and fall, the market value of utility stocks can be expected to move in the opposite direction. Exhibit 1 of this report contains two graphs that illustrate this relationship. The first shows the yield on long-term U.S. Treasury bonds from 1988 through 2000. While the long-term trend in rates was down, there were cyclical upturns in interest rates, particularly in 1994 and 1999. The second graph shows the UTY Utility Stock Index (PHLX: UTY), a widely used indicator of utility stock values. The UTY moved as expected through most of the decade, until mid-2000, when the market fell in love with the merchant power sector.

**2001-05**

With the rapid rise and fall of the merchant power sector beginning in 2001, the relationship between long-term interest rates and utility stock prices reversed. Exhibit 2 of this report shows interest rates and utility stock prices from 2001 to the present. Rather than moving in opposite directions, the two indicators have shown a positive relationship. Interest rates declined in 2001 and 2002, and utility stock prices dropped as well. Rates have, on balance, been on the rise since mid-2003, with a growing economy and rapidly rising commodity prices. Utility stock prices have been on the rise since then.

While no single factor can account for this reversal, we believe the merchant power phenomenon was a strong contributor. The deregulation of most wholesale and many retail power markets created opportunities for utilities to break free from the limitations of their regulated businesses and grow earnings at double-digit rates. Investors rewarded companies in the merchant space with high earnings multiples. The power business, in the minds of investors, moved from being a defensive, stable, low-growth infrastructure business to a pro-cyclical industrial commodity business, like chemicals and basic metals. Enron became the poster child for the sector, using the technology of the new economy to transform the perception of the business and its value to investors.

With the bankruptcy of Enron, the sector collapsed as fast as it had risen. In its wake, the Back to Basics theme emerged among utilities. Beginning in late 2002, and continuing through 2004, utilities were downsizing or divesting their merchant businesses. Noncore assets were abandoned or sold, with the proceeds used to pay down debt. Hugely dilutive equity offerings were needed to repair balance sheets.

Investors began paying premiums for the safety of regulated earnings and predictable dividends. As the percentage of the sector's earnings coming from regulated operations increased, so did the value of utility stocks. As shown on Exhibit 2, the UTY increased from about 250 to nearly 400 during this period, even though interest rates were on the rise. Energy companies had turned themselves back into utilities.

**The Future**

Companies are once again investing in their utility operations to grow earnings. Capital spending for new generating plants, environmental compliance, customer growth, and to improve the reliability of an aging infrastructure is on the rise. For the 18 principally electric power companies in our coverage group, estimated capital spending (excluding acquisitions) for 2005 totals \$22.50 billion, a 17% increase over \$19.25 billion for 2004. Spending is up for all but three of these companies, two of which completed new generating plants in 2004. Higher spending is not limited to 2005. Current estimates are that spending will remain high for 2006 and will likely increase later in the decade.

Higher capital spending translates into rate base growth and rate base growth means earnings growth, as long as the regulators are willing to provide timely and adequate increases in rates. Regulators have encouraged investment in utility assets. In many jurisdictions, regulators have "preapproved" the ratemaking treatment of new construction projects, reducing regulatory risk. Investors have also benefited from this new-found cooperation between utilities and regulators.

**The Dark Side**

The "dark side" of the Back to Basics strategy is that a rising capital spending program during a period of rising inflation and interest rates will begin to impact earnings growth, which could then begin to affect P/E multiples. As interest rates rise, the cost of debt for a new plant and to refinance maturing obligations increases. Higher plant costs, operating expenses, fossil fuel prices, and investments to meet environmental regulations all put upward pressure on rates to customers. Without rate relief, earnings will suffer until a rate case can be prepared, filed, and litigated.

We have started to see signs that utility regulators are not a permanent source of future earnings growth. Prices for all fossil fuels, oil, coal, and natural gas have skyrocketed over the past year and show no signs of abating. Fuel costs are usually the largest single cost item in electricity production. Utilities generally do not earn a margin on fuel as its costs are passed through in an adjustment mechanism. Utility customers do not care whether their rates are rising because of fuel prices or because of utility spending. They just know that their utility costs are going up, along with gas prices and other basic necessities, and they are not happy about it.

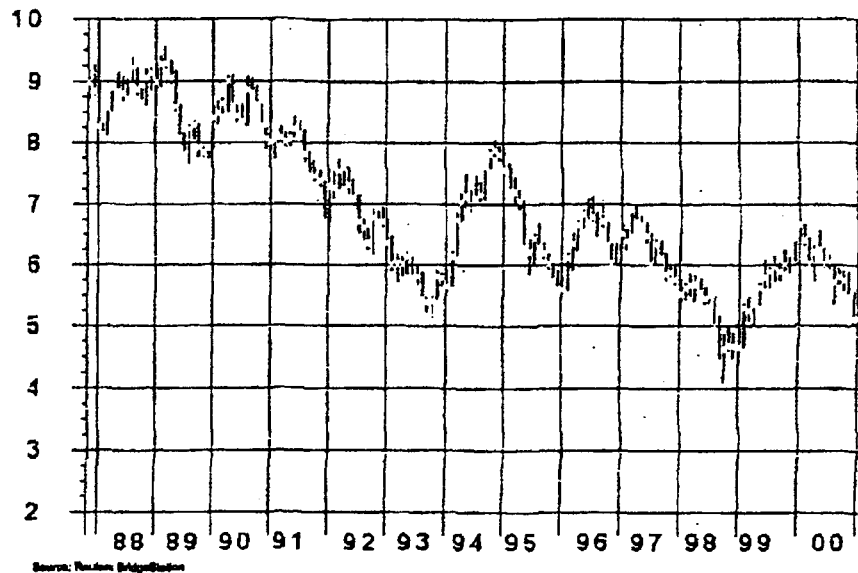
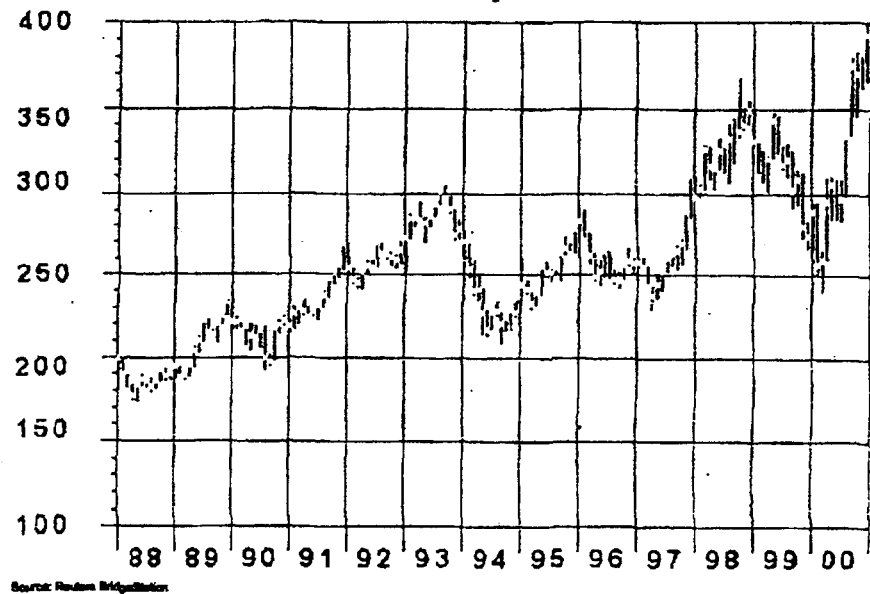
Utilities are coming to regulators for rate increases to recover higher fuel prices, the cost of compliance with new environmental regulations, and investments for reliability improvements and for customer growth. With higher utility spending and the rising cost of fuel, electric utility revenue requirements are likely to grow faster than the general level of inflation for many years. Utilities are likely to meet increasing opposition to requests for higher prices. Regulators, who are either elected by the public or appointed by people who are elected by the public, will likely react to political pressures with creative ways of avoiding rate increases.

**Utility Stocks**

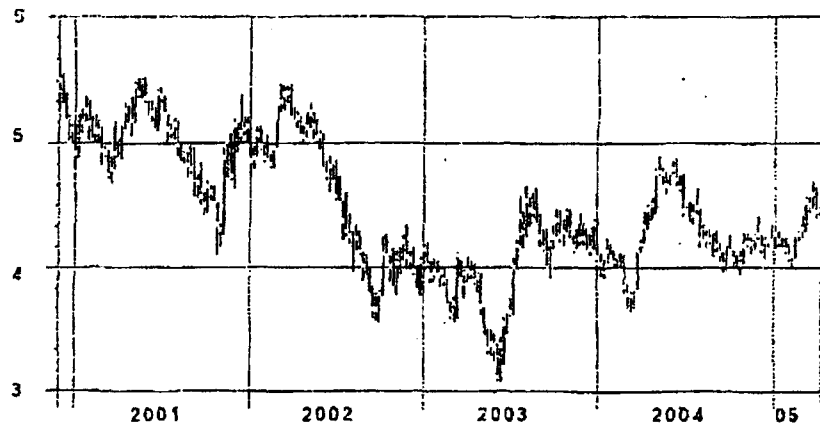
With utility companies acting like utilities again, it should not be long before utility stocks start trading like utility stocks once again. Utility stocks could fall 10-20% if the historical connection to interest rates returns. Interest rates have been on the rise and expectations of yields on long-term U.S. Treasury bonds above 5% are common. The UTY Utility Stock Index is trading around 400, near its all-time high. Prior to 2001, the last time the yield on 10-year U.S. Treasury bonds was at 5%, the UTY traded between 325 and 350, or 10-20% below current prices.

We see these conditions developing over a period of time. We believe investors should focus their holdings in the sector to those companies that have minimal exposure to regulatory lag or are able to offset earnings attrition within their regulated businesses with strong nonregulated operations. These include Constellation Energy (CEG), Dominion Resources (D), Entergy (ETR), FPL Group (FPL), and Southern Company (SO).

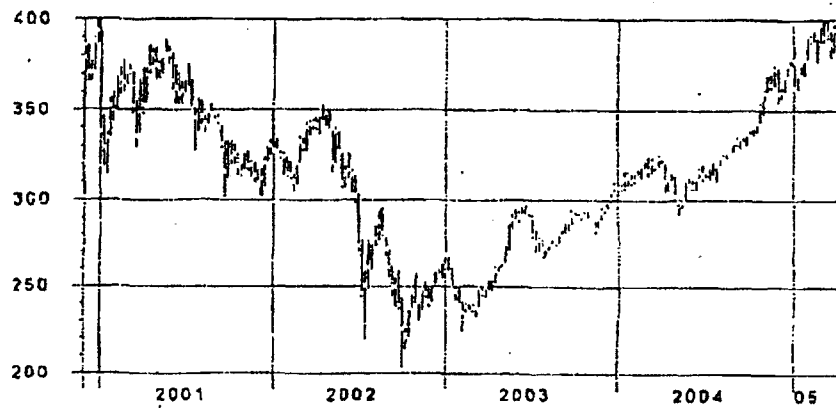
## Exhibit 1.

10-Year U.S. Treasury Yield 1988-2000  
(%)Utility Stocks 1988-2000  
UTY - PHLX Utility Index

## Exhibit 2.

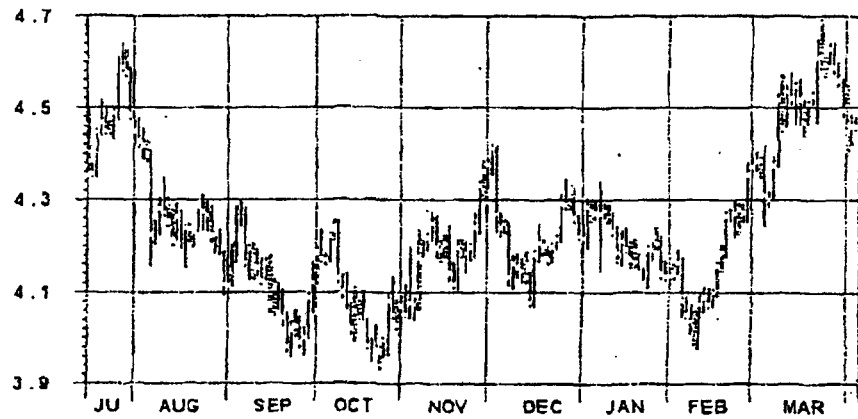
10-Year U.S. Treasury Yield 2001-05  
(%)

Source: Reuters BridgeStation

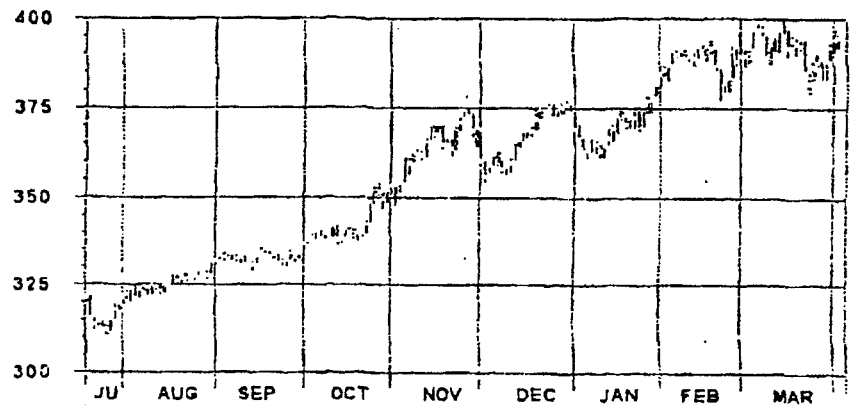
Utility Stocks 2001-05  
UTY: PHLX Utility Index

Source: Reuters BridgeStation

## Exhibit 3.

10-Year U.S. Treasury Yield – Last 180 Days  
(%)

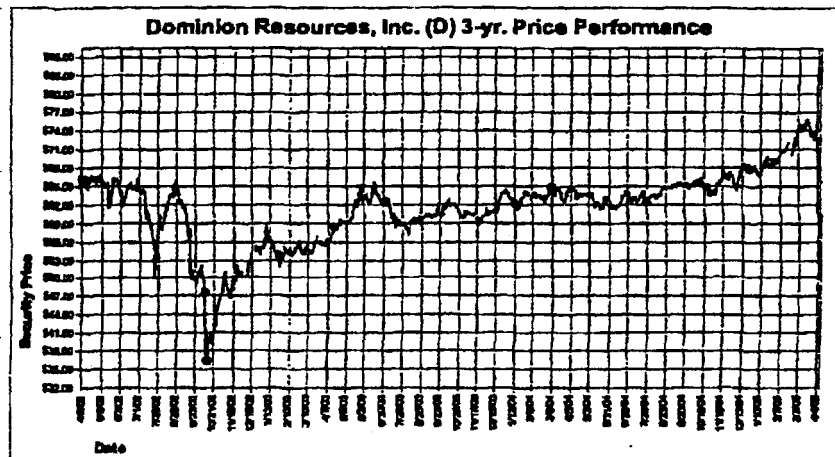
Source: Reuters BridgeStation

Utility Stocks – Last 180 Days  
UTY – PHLX Utility Index

Source: Reuters BridgeStation



## Utilities: The Dark Side Of "Back To Basics"

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	Date	Close Price (\$)	Rating Code	Target Price (\$)	Val. Rng. Low	Val. Rng. High
	4/6/02	Harbor				
	4/6/02	88.00	1	83.00	NE	NE
•	10/1/02	47.75	1	82.00	NE	NE
•	10/9/02	36.00	1	80.00	NE	NE
•	10/11/02	33.88	1	84.00	NE	NE
•	4/16/03	39.41	1	NE	58.00	82.00
▼	5/27/03	64.65	2	NE	58.00	82.00
•	7/1/03	62.63	2	NE	58.00	84.00
▲	7/14/03	88.30	1	NE	80.00	84.00
•	3/5/04	85.08	1	NE	82.00	88.00
•	7/27/04	82.83	1	NE	84.00	79.00
•	10/21/04	85.08	1	NE	85.00	71.00
•	12/21/04	88.04	1	NE	85.08	78.00
▼	1/27/05	69.35	2	NE	85.00	78.00

Source: Wachovia Capital Markets, LLC estimates and Bridge data

Beginning 01/04/2003 stock valuation range replaces target price

## Symbol Key

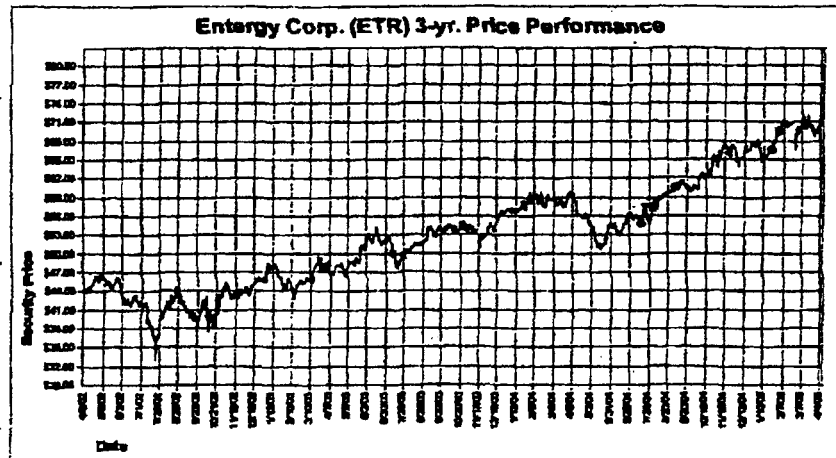
- Rating Scale Conversion
- Rating, Target Price and/or Val. Rng. Chngs.
- ▼ Rating Downgrade

- ▲ Rating Upgrade
- Analyst Change
- Split Adjustment

## Rating Code Key

- 1 Outperform
- 2 Market Perform
- 3 Underperform
- SR Suspended
- NR Not Rated
- NE Not Estimate

Utilities

WACHOVIA CAPITAL MARKETS, LLC  
EQUITY RESEARCH DEPARTMENT

	Date	Close Price (\$)	Rating Code	Target Price (\$)	Val. Rng. Low	Val. Rng. High
	3/27/03	Harbinger				
■	3/1/03	47.83	2	NE	47.00	51.00
●	7/1/03	50.09	2	NE	48.00	52.00
▲	7/28/03	48.73	1	NE	30.00	54.00
▼	10/9/03	51.63	2	NE	50.00	54.00
●	10/24/03	54.45	2	NE	50.00	55.00
■	2/2/04	56.70	2	NE	53.00	57.00
▲	8/1/04	54.75	1	NE	53.00	57.00
●	7/14/04	54.98	1	NE	55.00	60.00
▼	7/2/04	57.31	2	NE	54.00	60.00
●	8/2/04	57.90	2	NE	55.00	61.00
●	9/2/04	60.82	2	NE	58.00	63.00
●	1/2/05	64.88	2	NE	65.00	70.00
●	1/5/05	69.54	2	NE	66.00	71.00

Source: Wachovia Capital Markets, LLC estimates and Bridge data

Beginning 01/04/2003 stock valuation range replaces target price

## Symbol Key

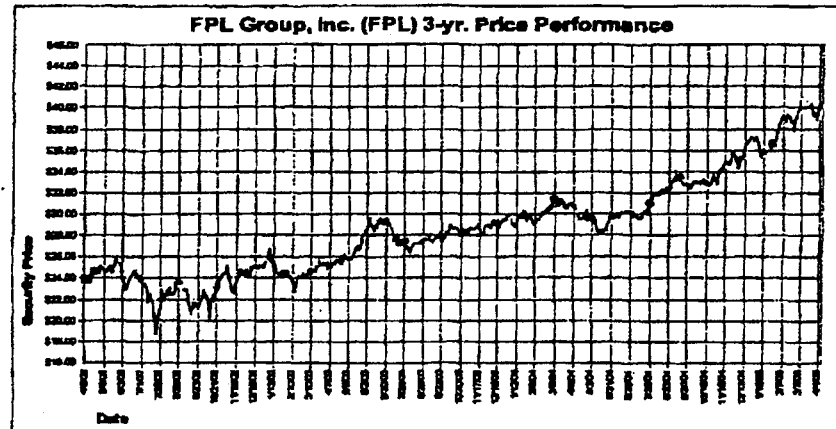
- Rating Scale Conversion
- Rating, Target Price and/or Val. Rngs. Change
- ▼ Rating Downgrade

- ▲ Rating Upgrade
- Analyst Change
- Split Adjustment

## Rating Code Key

- 1 Outperform
- 2 Market Perform
- 3 Underperform
- SA Suspended
- NR Not Rated
- NE Not Estimate

## Utilities: The Dark Side Of "Back To Basics"

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	Date	Close Price (\$)	Rating Code	Target Price (\$)	Val. Range Low	Val. Range High
■	4/1/02	Harold				
●	4/1/02	24.00	2	31.50	NE	NE
●	4/1/02	24.75	2	33.00	NE	NE
▼	10/18/02	22.53	1	NE	NE	NE
▲	4/24/03	25.53	2	NE	28.50	30.50
●	7/14/03	27.91	1	NE	28.50	30.50
●	7/25/03	27.48	1	NE	30.00	32.50
●	10/23/03	28.49	1	NE	30.50	33.00
▼	12/18/03	28.50	2	NE	30.50	33.00
●	3/5/04	31.39	2	NE	30.00	35.00
●	4/22/04	29.81	2	NE	31.50	34.00
▲	8/1/04	29.84	1	NE	31.50	34.00
●	7/23/04	31.07	1	NE	32.50	35.00
▼	7/23/04	31.81	2	NE	32.50	35.00
●	8/7/04	33.50	2	NE	32.50	35.00
●	1/21/05	34.55	2	NE	35.00	37.50
-	3/1/05	2-4cr-1 split				

Source: Wachovia Capital Markets, LLC estimates and Bridge data

Beginning 8/1/04/2003 stock valuation range replaces target price

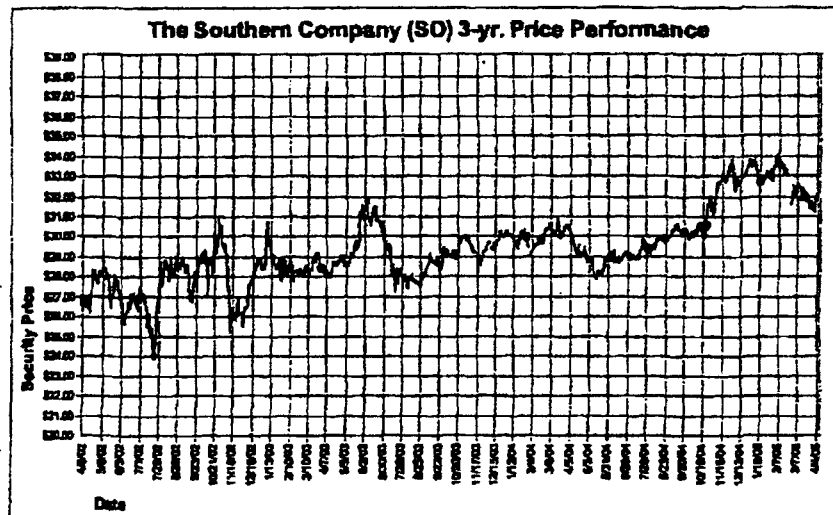
## Symbol Key

- Rating Scale Conversion
- Rating, Target Price and/or Val. Range, Chngs.
- ▼ Rating Downgrade

- ▲ Rating Upgrade
- Analyst Change
- Split Adjustment

## Rating Code Key

- 1 Outperform
- 2 Market Perform
- 3 Underperform
- SR Suspended
- NR Not Rated
- NE Not Estimate



	Date	Close Price (\$)	Rating Code	Target Price (\$)	Val. Rng. Low	Val. Rng. High
■	4/8/02	Hardin				
	4/8/02	26.83	NR	NE	NE	NE
●	3/27/03	28.48	3	NE	23.00	25.00
●	1/29/04	30.02	3	NE	24.00	26.00
▲	8/1/04	28.36	2	NE	24.00	26.00
●	7/28/04	29.45	2	NE	25.00	29.00
●	10/21/04	30.62	2	NE	26.00	31.00
●	1/10/05	32.78	2	NE	29.00	33.00

Source: Wachovia Capital Markets, LLC estimates and Bridge data

Beginning 01/04/2003 stock valuation range replaces target price

**Symbol Key**

- Rating Scale Conversion
- Rating, Target Price and/or Val. Rngs. Change
- ▼ Rating Downgrade

- ▲ Rating Upgrade
- Analyst Change
- Split Adjustment

**Rating Code Key**

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- 2 Market Perform
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- SR Suspended
- NR Not Rated
- NE Not Estimate

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**WACHOVIA SECURITIES**

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## **Research Update: Pinnacle West Capital's, Arizona Public Service's Ratings Lowered To 'BBB-'; Outlook Stable**

**Publication date:** 21-Dec-2005  
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**Credit Rating:** BBB-/Stable/A-3

### **Rationale**

On Dec. 21, 2005, Standard & Poor's Ratings Services lowered its corporate credit ratings on Pinnacle West Capital Corp. (PWCC) and principal electric utility subsidiary Arizona Public Service Co. (APS) to 'BBB-' from 'BBB'. The outlook is stable.

This action is based on increased regulatory and operating risk at APS. Specifically, Standard & Poor's is concerned that the Arizona Corporation Commission (ACC) is not expeditiously addressing APS' growing fuel and purchased-power cost deferrals, which have grown much more rapidly than expected in 2005, particularly because of elevated gas prices and the utility's increased dependence on this fuel. In November 2005, APS filed for a nearly 20% increase in customer electric rates, but it appears unlikely that a resolution will be reached until 2007, and may be delayed to mid-2007. Combined with a year of weaker-than-expected performance at the historically reliable Palo Verde nuclear station, Standard & Poor's now views the business profile of PWCC and APS as a satisfactory '6' (on a 10-point scale where '1' is excellent) and no longer a '5'.

APS's fuel and purchased-power cost deferrals were nearly \$150 million as of Sept. 30, 2005. Because the ACC has not acted on the utility's request to recover a portion of this amount in a surcharge, this entire balance, and any new additions through Dec. 31 will be carried into 2006. Standard & Poor's estimates that the utility may incur an additional \$265 million in deferral balances by year-end 2006. Actual balances will be a function of how the ACC addresses existing amounts, as well as forward market prices and the company's hedged positions. To date, APS has hedged about 85% of its purchased power and natural gas fuel price risk for its retail load in 2006 and 65% in 2007.

A surcharge proceeding that would resolve \$80 million of the utility's current deferrals has been before the commission for five months. The surcharge process was mandated by the ACC as part of the settlement of APS's 2003 rate case that it approved in March 2005. APS is required to notify the ACC when its fuel and purchased-power deferrals reach \$50 million and to file a plan for recovery before

deferrals exceed \$100 million. In July 2005, the utility filed an application to recover about \$100 million through a two-year surcharge, but reduced it to \$80 million to exclude Palo Verde outage related costs, which will be addressed in a later proceeding. If approved, residential rates would increase about 1.6%.

Since the fall of 2005, Standard & Poor's has conditioned a stable outlook on the satisfactory resolution of this portion of deferrals before year-end. Yet, because of the sustained increase in deferrals, even if the surcharge is implemented, it will likely resolve only about one-half of the company's expected deferred balances at year-end 2005.

Beyond the surcharge, additional 2005 deferred balances can be addressed through an adjustment to the company's power supply adjuster (PSA). However, the PSA has several limitations. It allows APS to collect 90% of the difference between actual fuel, purchased power, and associated hedging costs and those reflected in retail rates. But as per the settlement, APS may not be granted an adjustment before April 2006. Until then the PSA is set at zero. This is problematic because retail rates reflect fuel and purchased-power costs based on 2003 costs when the price of natural gas averaged about \$5.50 per million BTU. In addition to a certain wait of four months for PSA adjustments to be authorized, upward adjustments are capped at 4 mills per kilowatt-hours for the life of the mechanism. As a result, all or nearly all of the PSA capacity is likely to be absorbed in APS's first PSA filing, and the utility is expected to end the summer of 2006 needing another surcharge to address additional balances that will accumulate. Thus, any rate relief granted for remaining 2005 deferrals will not completely resolve the issue because the onset of the utility's summer cooling season in late April will contribute additional amounts to deferred balances.

APS's new general rate case request totals \$409.1 million (19.9%) increase in annual revenues. About \$247 million of the request is related to increased fuel and purchased-power costs. Recent public statements by the ACC suggest spring 2007 may be the earliest a decision could be expected. APS's last rate case took nearly 23 months to conclude, and there is therefore substantial uncertainty as to when the case will be completed.

An additional factor contributing to PWCC's weakened business profile is the performance of the Palo Verde nuclear units in 2005. The three-unit facility typically supplies 25% to 30% of the utility's energy requirements. In 2005, the combined capacity factor for the three units is expected to be about 78%, against the company's forecast of 86%. While some of the deterioration reflects the expected increase in Unit 1's refueling outage to 75 days from 33 days, enabling the replacement of the unit's steam turbine generators, the units have been beset by a series of operational problems, which include an overhang of issues first raised by the NRC in 2004. Specifically, in the summer of 2004, the company identified piping in a portion of the emergency cooling system that was dry, a situation that the NRC flagged as "yellow," the second-most serious of four categories of violations.

The yellow flag triggered onsite NRC inspections in the fall of 2005. On Oct. 11, 2005, Units 2 and 3 were taken off line after NRC officials posed questions as to how the emergency cooling systems might operate under a range of hypothetical scenarios. The plants were brought back into service 10 days later, after the company successfully demonstrated that the cooling systems would operate as

designed. An NRC inspection report related to the cooling system issues is expected in December 2005. Other operational problems have also occurred. In the spring of 2005, problems with the pressurizer heating elements in Unit 3 resulted in the extension of a planned 10-day outage to 32 days. In September, APS announced that day-to-day management of Palo Verde has been reorganized.

PWCC's consolidated cash coverage metrics are expected to be largely in line with 2004 results, which were very weak due to APS's delayed rate relief. For the 12 months ending Sept. 30, adjusted funds from operations (FFO) to interest coverage was 3.3x, identical to coverage at the end of 2004. The 12-month adjusted FFO to total debt was 14.8%, and reflects about \$80 million in cash flows from Suncor assets sales that will not be realized in 2006 at this level. Future cash flow metrics will depend significantly on the ACC's actions, but are generally not expected to display any significant improvement through 2006 due to a continued build up of deferrals. Performance in 2007 will be heavily predicated on how long it takes for the ACC to rule on the company's base rate increase. Due in large part to PWCC's April 2005 issuance of \$250 million in common stock, adjusted debt to total capitalization remains solid at 53%. However, borrowing requirements could rise in 2006 to fund APS's additional power and fuel costs deferrals and to invest in capital expenditures.

### Short-term credit factors

PWCC's short-term rating is 'A-3'. The rating is supported by the preponderance of cash flows being produced by APS, a vertically integrated electric utility. Because of APS's sizable commercial paper program, near-term liquidity should be adequate to support cash outlays for power and fuel not recoverable in rates. And, because APS is heading into its winter season, when demand for electricity for space cooling drops significantly, the build-up of its power cost deferrals should slow. APS has hedged most of its power and gas purchases remaining in 2005, 85% of 2006 requirements, and about 65% for 2007.

Consolidated cash and investments stood at more than \$900 million as of Sept. 30, 2005. However, \$500 million was used on Oct. 3, 2005 to call Pinnacle West Energy Corp.'s (PWEC) floating-rate notes that were due April 2007. Also affecting the cash and invested position is the increased amount of collateral held under bilateral contracts.

PWCC and APS maintain commercial paper programs. Neither program had any balances as of Dec. 20, 2005. PWCC's program is for \$250 million and is supported by a five-year, \$300 million credit facility that expires in December 2010. The revolver allows PWCC to use up to \$100 million of the facility for letters of credit. The revolver has no material adverse change clauses.

APS's short-term rating is also 'A-3'. The rating is supported by the stability of cash flows from regulated operations and good liquidity, although APS will need to continue to rely on borrowings to fund portions of its capital expenditure program, which is expected to be about \$800 million in 2005 (and includes \$190 million for the purchase of the Sundance power plant), up significantly from \$484 million in 2004. APS maintains a \$250 million commercial paper program. APS has a five-year, \$400 million revolver that expires in December 2010 that supports its commercial paper program, and also provides an additional \$150 million for other liquidity needs,

including \$100 million for letters of credit. The supporting facility has no material adverse change clauses. Consolidated maturities are modest and consist of \$384 million in 2006, of which \$300 million is a note at the parent, which is due in April. Currently, there are virtually no obligations due in 2007, as PWEC called at par in early October some \$500 million in notes that it issued in April 2005 to retire an intercompany loan between PWEC and APS that was associated with the PWEC assets now owned by APS.

## Outlook

The stable outlook reflects Standard & Poor's expectation that the ACC will resolve at least a portion of APS's increasing deferred power costs in January 2006. In addition, the outlook presumes that progress will be made in addressing APS' general rate case and that any outcome will support the return of consolidated financial metrics to what until 2004 was a reasonable performance. The stable outlook is also dependent on improved 2006 performance at Palo Verde. Any adverse regulatory development or continued delays in resolving the pending surcharge request could result in a downward revision of the outlook or an adverse rating action. Because no meaningful improvement in the consolidated financial profile is expected in the near term, the potential for positive rating changes does not currently exist.

## Ratings List

### Ratings Lowered

	To	From
Pinnacle West Capital Corp.		
Corp credit rating	BBB-/Stable/A-3	BBB/Stable/A-2
Senior unsecured debt	BB+	BBB-
Commercial paper	A-3	A-2
Arizona Public Service Co.		
Corp credit rating	BBB-/Stable/A-3	BBB/Stable/A-2
Senior unsecured debt	BBB-	BBB
Commercial paper	A-3	A-2

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# RESEARCH

## Research Update: APS, PWCC's 'BBB-' Corporate Credit Ratings Affirmed On ACC Vote But Challenges Continue

**Publication date:** 26-Jan-2006  
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**Credit Rating:** BBB-/Stable/A-3

### Rationale

Standard & Poor's Ratings Services affirmed its 'BBB-' corporate credit ratings on Arizona Public Service (APS) and its parent, Pinnacle West Capital Corp. (PWCC), following the generally constructive decisions made by the Arizona Corporation Commission (ACC) on Jan. 25. The commission lifted a cap that limited APS' opportunity to recover fuel and purchased power costs and modestly advanced the collection of deferred costs that

APS was incurring under the terms of its power supply adjuster (PSA). However, the ACC also restricted APS' ability to file for a surcharge, which raises certain credit concerns. The outlook is stable. The ACC vote to remove the \$776 million cap on annual fuel and purchased power costs is favorable because it allows APS to defer any costs that exceed this level, which is in fact expected to occur in late 2006. APS' current deferral level is about \$170 million, which will likely increase by approximately \$250 million this year. The ACC adopted an amendment to advance the commencement of recovery of these costs by two months to Feb. 1 from April 1. While the impact is small, providing APS only about \$14 million of incremental recovery in 2006, the vote is an important indicator that the ACC acknowledges that timely action is necessary to limit cash flow pressure on the company. (Note: As a result of staff and company testimony, some of the numbers Standard & Poor's cited in its Jan. 25 credit FAQ have been updated here.)

However, the ACC also voted to prohibit APS from requesting surcharges before the annual PSA adjuster is implemented. Heretofore, Standard & Poor's understood that APS would be permitted to file for surcharge relief any time that deferrals reached \$100 million, as appeared to be implied by the settlement in its last rate case, as amended by the ACC in March 2005. With respect to the \$170 million of deferrals that have accumulated as of year-end 2005, the recently enacted PSA adjuster will generate only about \$111 million over the next 12 months. The remaining \$59 million will be addressed through a surcharge filing, which may be made only after Feb. 1, but for which the collection timeline and approval date are uncertain.

While a technicality, the surcharge vote removes potentially critical flexibility for timely recovery of prudently incurred fuel and purchased power costs. The PSA has a very narrow 4 mill per kilowatt-hour lifetime cap, and the ACC is not bound to act on a surcharge filing by any specific date. As a result, the ACC's decision could cause uncertainty over the timing and disposition of future, expected deferrals.

Standard & Poor's current expectation is that high fuel and purchased power costs will result in a 2006 deferral problem that is larger than that of 2005. The ACC's vote to limit the flexibility of the timing of the surcharge elevates the importance of APS' request for \$299 million in interim emergency rate relief, which is expected to be ruled on in April. That is, a limited PSA with a backstop surcharge that can be filed according to a specified timeline places incremental pressure on other processes that could support credit quality through 2006, especially when permanent rate relief via a general rate case ruling is not expected to occur within the next year.

Much of these issues stem from the very weak PSA, which is triggered based on a date and not on a threshold level of deferrals and which limits any adjustment to a narrow cap. This structure transfers any deferred balances to a surcharge process. In turn, the surcharge process is open-ended, with no concrete timeline for resolution. At the same time, APS has a significant reliance on natural gas. And this dependence is expected to grow in the coming years. Given the volatility of this fuel and expectations that at least in the near-term prices will remain high relative to historic levels--certainly relative to 2003 levels on which current retail rates are based--a critical underpinning of credit quality is the timing of recovery. This emphasis is particularly important in Arizona, where there is little precedent to support the conclusion that general rate cases processed quickly.

However, despite the emphasis that Standard & Poor's places on power supply adjustment mechanisms, it is possible that if the ACC establishes a track record of being supportive and timely toward emergency rate relief requests, that this vehicle could compensate for the current limitations of APS' PSA.

## Outlook

The stable outlook is premised on the ACC providing sustained regulatory support that adequately addresses building deferrals. Negative rating actions could result if regulatory support does not continue, or if market forces or operational issues lead to significant increases in the expected 2006 deferral level.

## Ratings List

Pinnacle West Capital Corp.	
Corp credit rating	BBB-/Stable/A-3
Senior unsecured debt	BB+
Commercial paper	A-3

Arizona Public Service Co.	
Corp credit rating	BBB-/Stable/A-3
Senior unsecured debt	BBB-
PVNGS II funding Corp Inc.	BBB-
Commercial paper	A-3

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**Rating Action: Arizona Public Service Company**

**MOODY'S PLACES THE DEBT RATINGS OF PINNACLE WEST (SR. UNS. Baa2) AND ARIZONA PUBLIC SERVICE CO. (SR. UNS. Baa1) UNDER REVIEW FOR DOWNGRADE**

**Approximately \$3.5 Billion of Debt Securities Affected**

New York, January 10, 2006 -- Moody's Investors Service placed the long-term ratings of Pinnacle West Capital Corporation (Pinnacle: Baa2, senior unsecured) and its subsidiaries Arizona Public Service Company (APS: Baa1, senior unsecured) and PVNGS II Funding Corp. Inc. (PVNGS II: Baa1, senior secured lease obligation bonds) under review for possible downgrade. Pinnacle's Prime-2 short term rating for commercial paper rating was also placed under review for possible downgrade. There are currently no commercial paper borrowings outstanding for Pinnacle. The Prime-2 and VMIG-2 short-term ratings for APS have been affirmed.

The rating review follows a recommendation of an Arizona administrative law judge that APS's application for a special rate surcharge be denied. The review is prompted by deterioration in the company's current and projected financial metrics as a result of increased fuel and purchased power costs that the company has not been able to recover on a timely basis.

The review will focus on the outcomes of the various rate requests that APS has filed or is expected to file with Arizona Corporation Commission (ACC). Due to the substantial increase in market prices of fuel and electricity, APS is experiencing sharp cost increases. The magnitude of rate increases needed to cover these costs is sufficiently large to be likely to trigger regulatory and ratepayer resistance. In this context the recommendation by the administrative law judge does not bode well for full and timely recovery of increased costs. Moody's now expects 2006 results to be significantly weaker than previously projected. We previously expected that the 2006 ratio of APS's and Pinnacle's funds from operations (FFO) to adjusted total debt (incorporating Moody's standard analytic adjustments) would both be in the upper teens on a percentage basis. We now estimate that 2006 results will produce ratios that are several percentage points lower, and that results will continue to be somewhat weaker beyond 2006 unless there are sufficient rate increases including recovery of fuel and purchased power deferrals or a substantial decline in market prices for fuel and wholesale power.

There remains a significant amount of uncertainty surrounding the ultimate amount of cash that APS and Pinnacle will generate in 2006. APS and Pinnacle's financial strength are highly dependent upon timely implementation of cost recovery mechanisms. As part of its final 2005 rate order, the ACC approved a mechanism for the deferral of fuel and purchased power costs with the annual adjustor to begin in April 2006 (the PSA adjustment mechanism). The ACC also approved a mechanism for a special surcharge should the deferral balance become too large. Last week, an administrative law judge (ALJ) recommended denial of APS's request to implement the special surcharge of approximately

2% even though the ACC staff and a major consumer group agreed to its implementation shortly after the request was made in July 2005. In addition to its pending application for the special surcharge, APS will file for an increase of approximately 5% in the near future via the PSA adjustment mechanism to recover remaining increased costs incurred in 2005. APS also just filed a separate request for an emergency interim rate increase of approximately 14% to start recovery of higher 2006 fuel and purchased power costs beginning April 1, 2006. The emergency filing also seeks removal of the current \$776.2 million annual cap on recovery of fuel and purchased power costs as approved by the ACC in 2005.

Beyond 2006, supportive regulatory treatment remains key to the company's ability to maintain financial strength in light of significant needs for capital investment to serve a growing service territory. In November 2005, APS filed a general rate case requesting an approximate 20% increase to rates beginning in 2007. (The recent emergency filing represents the fuel component of the general rate case.) A procedural schedule has yet to be set for this case, and it is possible based on recent experience that the case could take longer than expected, and result in a rate increase that is lower than requested.

An assessment of likely regulatory outcomes will be a significant factor in concluding the review for downgrade. The ratings of APS and Pinnacle are likely to be downgraded unless there are clear signals that APS will receive timely and full recovery of its increased costs such that we would expect their credit metrics to return to levels commensurate with those of similarly rated utility companies. For example, we currently expect FFO/debt to be several percentage points lower than comparably rated peer companies. The affirmation of APS's short term ratings reflects the likelihood that the rating review will not result in a downgrade of its long-term rating by more than one notch unless there are significant operational issues or the regulatory outcome appears to be worse than anticipated with regard to requested rate adjustments.

Ratings placed under review for possible downgrade include:

Pinnacle West Capital Corporation:

- Issuer Rating, senior unsecured debt and syndicated bank credit facility; Baa2,
- Shelf registration for the issuance of senior and subordinate debt securities and preferred stock; (P)Baa2, (P)Baa3, and (P)Ba1 respectively,
- Short term rating for commercial paper; Prime-2.

Arizona Public Service Company:

- Issuer Rating, senior unsecured debt and syndicated bank credit facility; Baa1,
- Shelf registration for the issuance of senior or subordinate debt securities; (P)Baa1 and (P)Baa2 respectively.

PVNGS II Funding Corp., Inc.

- Senior secured lease obligation bonds; Baa1.

Ratings affirmed include:

**Arizona Public Service Company - Short term ratings; Prime-2 and VMIG-2.**

Headquartered in Phoenix Arizona, Pinnacle West Capital Corporation provides electric service to a substantial portion of the state of Arizona, sells energy-related products and services, and develops residential, commercial and industrial real estate. Pinnacle conducts its business through subsidiaries. Wholly owned subsidiary Arizona Public Service Company is its principal subsidiary.

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Fitch Lowers PNW & APS' Sr. Unsecured Ratings to 'BBB-' & 'BBB', Respectively; Outlook Stable Ratings  
30 Jan 2006 4:23 PM (EST)

Fitch Ratings-New York-30 January 2006: Fitch Ratings has lowered Pinnacle West Capital's (PNW) long- and short-term ratings. At the same time, Fitch has lowered Arizona Public Service Company's (APS) long-term ratings, while affirming its commercial paper rating. The securities of PNW and APS have been removed from Rating Watch Negative, where they were placed Jan. 6, 2006. The Rating Outlook is Stable. The following actions are effective immediately:

Pinnacle West Capital:

- Issuer default rating (IDR) downgraded to 'BBB-' from 'BBB';
- Senior unsecured debt downgraded to 'BBB-' from 'BBB';
- Commercial Paper downgraded to 'F3' from 'F2'.

The Rating Outlook is Stable.

Arizona Public Service Co.

- IDR downgraded to 'BBB-' from 'BBB';
- Senior unsecured debt downgraded to 'BBB' from 'BBB+';
- Commercial Paper affirmed at 'F2'.

The Rating Outlook is Stable.

Approximately \$3.8 billion of debt is affected by the rating actions.

The rating actions and Stable Rating Outlook reflect the resolution of APS' power supply adjustor (PSA) proceedings by the Arizona Corporation Commission (ACC) and the utility's significant exposure to high and rising natural gas commodity costs. The commodity exposure is a function of a generating capacity mix, about half of which is natural gas fired, and rapid service territory load growth, which is likely to be met predominantly by natural gas-fired resources. The revised ratings also consider the operational risk and asset concentration of the Palo Verde nuclear plant. The facility has experienced intermittent operating problems over the past year and a sustained, unscheduled outage at the plant could lead to further negative rating actions.

The ACC decision in the PSA proceedings, issued on Jan. 25, 2006, has positive and negative implications for PNW and APS' creditworthiness. The commission's decision to accelerate the effective date of the PSA rate to Feb. 1 from April 1, along with the removal of the \$776 million annual power supply cost limit, were constructive developments in Fitch's view. However, the ACC bench order rejecting APS's \$80 million surcharge request on procedural grounds and restriction of PSA adjustments to an annual reset is less favorable than Fitch had anticipated in its previous ratings and is a significant source of concern for PNW and APS fixed-income investors. The fact that there is no vehicle within the PSA protocol to recover supply costs more frequently than annually during periods of sustained high and rising energy costs subjects APS to significant cash flow volatility and working capital requirements. Such costs would be exacerbated in a meaningful way by an extended outage of a base load nuclear- or coal-fired generating facility during periods of peak demand. The only option to recover fuel and purchase power costs above amounts determined annually in the PSA would be

an emergency rate filing, in which the timing and amount of rate relief would be uncertain.

It is Fitch's understanding that energy cost deferrals in a particular year of up to four mills per kilowatt hour (approximately \$110 million-\$115 million on an annual run rate) will be recovered through an annual PSA rate adjustment that will recover those costs over the following 12 months. The surcharge is expected to facilitate recovery of costs in excess of the four mills per kilowatt hour limit over a time horizon to be determined by the commission.

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# RESEARCH

## Summary: Arizona Public Service Co.

**Publication date:** 24-Jun-2005  
**Primary Credit Analyst:** Anne Selting, San Francisco (1) 415-371-5009;  
[mailto:anne\\_selting@standardandpoors.com](mailto:anne_selting@standardandpoors.com)

**Credit Rating:** BBB/Stable/A-2

### Rationale

Arizona Public Service Co. (APS) is a wholly owned subsidiary of Pinnacle West Capital Corp. (PWCC), and by far the most important company within the PWCC family. The ratings on APS and PWCC are based on the consolidated credit assessment method, resulting in the same corporate credit rating for the holding company and APS.

APS' business profile is satisfactory, a '5' on Standard & Poor's Ratings Services' 10-point scale (where '1' is excellent). Strengths specific to the utility include a Phoenix service territory that is the second-fastest growing region in the U.S. (behind Las Vegas), a diversified power supply portfolio, and the recent approval by the Arizona Corporation Commission (ACC) of a settlement in APS' rate case, which, through a 4.21% increase in retail rates and the addition of a fuel and purchased power costs adjuster, should modestly shore up a financial performance that has been weakening over the past several years.

APS' near-term challenges are largely related to regulatory lag. Timely recovery of costs incurred in the rate base will remain challenging for the utility, despite the recent completion of a major rate case. APS filed its recently completed rate case in June 2003, and the process that culminated in the settlement allowed a modest rate increase that took effect in April 2005, nearly two years later. Because these rates are based on a December 2002 test year, the utility will need to file a new rate case soon to reflect its significant capital expenditures and to keep current on its generation costs that are gradually becoming more concentrated in natural gas. While the fuel and purchased power adjuster is expected to provide some rate relief to the utility, the adjuster is capped at a level that will likely need to be revisited well before its expiration in five years. And, because load growth in APS' service territory is projected to grow about 4% per year over the next five years, APS will still need an additional 1,200 MW by the summer of 2007 to fill the gap between power supply and demand. APS recently issued a request for proposals to meet 1,000 MW of this demand.

PWCC's business profile of '5' reflects the most significant benefit of the APS settlement, which is the authorization that the utility received from the ACC to rate-base 1,790 MW of

generation that is currently owned by Pinnacle West Energy Corp (PWEC), PWCC's non-regulated wholesale generation subsidiary. The transfer received Federal Energy Regulatory Commission (FERC) approval on June 15, 2005, and should be completed by August 2005. PWCC announced June 21, 2005, that it has reached an agreement to sell its 425 MW interest in Silverhawk to Nevada Power Co. (NPC; B+/Negative/NR) for \$208 million. PWCC expects it will recognize an after-tax loss of about \$55 million with the sale. The elimination of merchant operations from PWCC's consolidated operations, combined with the scaling back of activities of its three other unregulated subsidiaries--SunCor, El Dorado, and APS Energy Services--has improved consolidated business risks and should help to achieve improved financial metrics, which have been weakening since 2002 as a function of APS' need for rate adjustments and PWEC's merchant operations.

Consolidated financial metrics remained largely in line with the rating, but in part due to a change in how Standard & Poor's approaches operating leases (see Standard & Poor's article, "Corporate Ratings Criteria--Operating Lease Analytics," published June 9, 2005, on RatingsDirect, Standard & Poor's Web-based credit analysis system, at [www.ratingsdirect.com](http://www.ratingsdirect.com)), 2004 consolidated adjusted funds from operations to total debt (FFO/TD) was weak at 14.1%. Additionally, due to the fact that APS retail rates were not increased until April 1, first-quarter FFO/TD metrics remain below benchmarks. Also negatively impacting FFO is an anticipated tax assessment of approximately \$100 million that is expected to be paid within the next year. The company's forecast expects 2005 metrics to stabilize, with expectations that FFO/TD will be approximately 17%. The cumulative impact of PWCC's \$250 million in equity issued in May, the realization of higher utility revenues through the rate increase, and the receipt of proceeds from the sale of Silverhawk, if completed, should help to achieve this expectation. However, the need for continued timely processing of APS' rate applications and reasonable rate relief will be critical to producing consolidated long-term financial health.

### Short-term credit factors

PWCC's short-term rating is 'A-2'. The rating is supported by the consolidated corporate credit rating, the fact that the preponderance of cash flows are produced by APS, a vertically integrated electric utility, and the expectations for diminished capital and liquidity requirements at PWEC. As of March 31, 2005, PWCC's liquidity was ample, with consolidated cash and cash equivalents at about \$250 million. This very strong cash position is due largely to APS' issuance of \$300 million in notes in June 2004 in order to pre-finance about \$400 million in utility obligations due in January and August 2005.

Both PWCC and APS maintain CP programs. Neither program had any CP balances as of March 31, 2005. PWCC's program is for \$250 million and is supported by a three-year, \$300 million credit facility that PWCC put into place in October 2004. The revolver allows PWCC to use up to \$100 million of the facility for letters of credit. The revolver has no material adverse change clauses pertaining to outstanding CP balances.

APS' short-term rating is also 'A-2'. The rating is supported by the stability of cash flows from regulated operations and good liquidity, although APS will need to continue to rely on borrowings to fund portions of its capital expenditure program, which is expected to be \$770 million in 2005 (which includes \$190 million for the purchase of the Sundance power plant), up significantly from \$484 million in 2004. APS maintains a \$250 million CP program. In May 2004, APS renegotiated its revolver and increased the size to \$325 million. Also a three-year term, the facility supports the utility's CP program and provides an additional \$75 million for other liquidity needs, including letters of credit. The supporting facility has no material adverse change clauses pertaining to outstanding CP balances.

## Outlook

The stable outlook reflects Standard & Poor's expectation that PWCC will continue to focus on the regulated operations of APS, which is projected to contribute more than 85% of its funds from operations in 2005. The failure of PWCC or APS to meet expected financial results in 2005 and 2006, particularly in light of the weakening in consolidated and utility credit metrics in 2004, could lead to a downward revision of the outlook or a ratings change. Downward pressure on the ratings will occur if APS incurs significant power or fuel cost deferrals in excess of the fuel and purchased power adjuster's limitations. Any positive rating action is unlikely in the near term given the financial metrics and the longer-term risks that the limitations placed on APS' power supply adjuster present.

## Add to My Research

Add

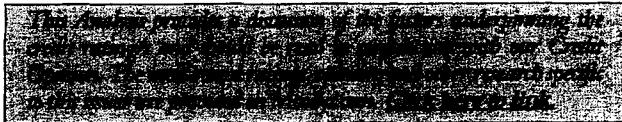
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## Analysis

UNITED STATES  
Americas

May 2005

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## Pinnacle West Capital Corporation

### CREDIT STRENGTHS:

- Strong cash flows generated by utility subsidiary Arizona Public Service Company
- Growth rates within APS's service territory are above the national average
- Demonstrated intent to maintain reasonable leverage
- Renewed focus on core regulated operations
- Accelerated asset sales program at real estate subsidiary, Suncor, is expected to enhance cash flow through 2005
- Management has been able to effectively manage the relatively unpredictable and challenging regulatory environment in Arizona

### CREDIT CHALLENGES:

- Pinnacle's cash flows are highly dependent upon dividends from APS
- Challenging state regulatory environment in Arizona
- Uncertain future for competition in Arizona
- Increasing capital expenditure requirements due to above average growth in APS's service territory

### Credit Strengths

#### **STRONG CASH FLOWS GENERATED BY UTILITY SUBSIDIARY ARIZONA PUBLIC SERVICE COMPANY**

Pinnacle West Capital Corporation (Pinnacle: Baa2 senior unsecured, stable outlook) derives the vast majority of its earnings and cash flow from its regulated utility subsidiary, Arizona Public Service Company (APS: Baa1 senior unsecured, stable outlook). In 2004, APS contributed over 80% of Pinnacle's consolidated funds from operations (FFO). After the 2005 completion of an accelerated asset sales program at Suncor, Pinnacle's real estate subsidiary, APS is projected to contribute over 95% of Pinnacle's cash flow.



**Moody's Investors Service**  
Global Credit Research

ATTACHMENT DEB-12  
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(\$ millions)	Pinnacle West				Arizona Public Service Company			
	2001	2002	2003	2004*	2001	2002	2003	2004*
Revenues	2,635	2,405	2,760	2,900	2,352	1,936	2,105	2,197
Total Assets	8,529	9,139	9,519	9,897	6,815	7,122	7,723	8,099
FFO	554	828	920	543	571	765	652	421
FFO/ Adj. Debt	15.0%	22.3%	23.9%	14.7%	20.9%	28.5%	21.3%	13.4%
RCF/ Adj. Debt	11.5%	18.6%	19.8%	10.2%	14.7%	22.2%	15.7%	8.0%
FFO + Adj. Interest/Adj. Interest	3.57	4.80	5.00	3.46	4.63	5.81	4.81	3.44
Adj. Debt/Adj. Capitalization	59.6%	58.0%	57.6%	55.6%	55.9%	55.4%	58.2%	58.7%

\*FFO in 2004 includes the impact of reclassification of a deferred tax liability to current liabilities. Debt is adjusted to reflect operating leases. Adjusted interest includes adjustment made for operating leases. Adjusted capitalization reflects the adjusted debt.

In 2004, and continuing into 2005, funds from operations were negatively effected by delayed rate action at APS. As a result of the ultimate conclusion of APS's rate case in March, combined with Pinnacle's recent equity offering and potential sale of its Silverhawk generating facility, we expect that there will be an improvement in credit metrics over the near to medium term. By 2006, the ratio of adjusted funds from operations (FFO) to total adjusted debt is projected to be about 20% for APS. Pinnacle's FFO as a percentage of total adjusted debt is projected to be about 18% in 2006.

#### **GROWTH RATES WITHIN APS'S SERVICE TERRITORY ARE ABOVE THE NATIONAL AVERAGE**

Much of the stable and robust cash flow at APS can be attributed to the economic strength of its service territory. APS's customer growth has been a primary driver of the utility's growth in earnings with customer growth averaging 3.7% in 2004, a pace three times the national average. APS currently projects customer growth will average about 3.8% per year from 2005 to 2007.

#### **DEMONSTRATED INTENT TO MAINTAIN REASONABLE LEVERAGE**

Pinnacle management has demonstrated its commitment to maintaining a reasonably strong balance sheet as it seeks growth in its core Arizona utility systems. In April, Pinnacle raised approximately \$250 million via an equity offering and also announced its intention to generate approximately \$200 million from the sale of its ownership interest in the Silverhawk generating facility in Nevada. The cash proceeds of both Pinnacle's equity offering and its Silverhawk divestiture will be injected as equity into APS to fund a portion of its increasing capital expenditures, including the purchase of the Sundance Generating Station (Sundance).

#### **RENEWED FOCUS ON CORE REGULATED OPERATIONS**

Pinnacle has reduced its business risk with its renewed focus on the company's core utility business. APS, Pinnacle's regulated Arizona electric utility subsidiary, comprises the bulk of Pinnacle's total operations. Cash and earnings contributions from Pinnacle's other subsidiaries are projected to continue to decline. Pinnacle's other subsidiaries include: 1) Pinnacle West Energy Company (PWEC: unregulated generation operations), the Arizona generating assets of Pinnacle West Energy Company (PWEC) are expected to be transferred to APS upon receipt of FERC approvals and PWEC's remaining ownership interest in the Silverhawk plant is likely to be sold; 2) SunCor Development Company (SunCor: real estate developer), which is at the end of an accelerated asset sales program; 3) APS Energy Services (APES: provider of energy-related products and services) these operations are not projected to contribute significant margins in the near term; and 4) El Dorado Investment Company (El Dorado: venture capital company), during 2004 El Dorado sold its investments in NAC International Inc., a company specializing in spent nuclear fuel technology, and the Phoenix Suns basketball team. Its goal is to prudently realize the value of its remaining investments. As of December 31, 2004 El Dorado had assets of \$23 million.

#### **ACCELERATED ASSET SALES PROGRAM AT REAL ESTATE SUBSIDIARY, SUNCOR, IS EXPECTED TO SIGNIFICANTLY ENHANCE CASH FLOW THROUGH 2005**

Suncor is a developer of residential, commercial, and industrial real estate projects in Arizona, Idaho, New Mexico, and Utah. SunCor has implemented an accelerated asset sales program that is scheduled to run from 2003 through 2005, substantially enhancing Pinnacle's cash flow over these years. During 2003 and 2004, Suncor up-streamed \$108 million and \$85.1 million of dividends to Pinnacle, respectively (compared to \$13.4 million in 2002). SunCor expects to generate net income of approximately \$50 million and to distribute approximately \$80-100 million to Pinnacle in 2005.

## **MANAGEMENT HAS BEEN ABLE TO EFFECTIVELY MANAGE THE RELATIVELY UNPREDICTABLE AND CHALLENGING REGULATORY ENVIRONMENT IN ARIZONA**

The regulatory environment in Arizona has historically been somewhat challenging and unpredictable. In 1999, the Arizona Corporation Commission (ACC) established rules moving the state toward full retail competition. In 2002, the ACC revisited the retail competition rules and significantly revised or waived many of the requirements established in 1999. Significant uncertainty surrounding the remaining implementation of the rules remains. Pinnacle management has been able to manage effectively within this environment. In 2003, Pinnacle received ACC approval of a \$500 million intra-company loan from APS to PWEC which was used to refinance debt incurred to fund the construction of generating facilities at PWEC. The intra-company loan was recently repaid. Most recently the company received ACC approval of a negotiated rate case settlement that: 1) provided for the inclusion of 1,800 MW of Arizona generating assets at PWEC in APS rate base, 2) provided an adjustment mechanism for the cost of fuel and purchased power, and 3) allowed a 4.2% rate increase, although the initial ACC staff recommendation had been a rate decrease.

## **Credit Challenges**

### **PINNACLE'S CASH FLOWS ARE HIGHLY DEPENDENT UPON DIVIDENDS FROM APS**

APS accounts for the bulk of dividends that are upstreamed to Pinnacle from its subsidiaries. In 2004, APS contributed over 65% of the dividends Pinnacle received from its subsidiaries with SunCor contributing the remainder. After 2005, APS will contribute nearly all of Pinnacle's cash flow. The concentration of Pinnacle's business activities at APS makes Pinnacle's performance highly sensitive to APS's operations. Historically, APS's regulated operations have generated relatively strong and predictable cash flows.

### **CHALLENGING STATE REGULATORY ENVIRONMENT IN ARIZONA**

The regulatory environment in Arizona has historically been somewhat political, challenging and unpredictable. In June 2003 APS filed a general rate case requesting the following: (1) a revenue increase of \$175.1 million, or 9.8% (intended to be effective July 1, 2004); (2) adjustment mechanisms for the recovery of fuel and purchased power costs; (3) the transfer of 1,800 MW of Arizona generating assets currently owned by subsidiary Pinnacle West Energy Company (PWEC) to APS; and (4) recovery of the \$234 million previously written-off by APS as part of its 1999 Settlement Agreement. In August 2004 APS and most of the intervenors in the rate case reached a settlement agreement that was submitted to the ACC for approval. On March 31, 2005 the ACC issued a final order in which most of the provisions of the settlement agreement were adopted as proposed. The key provisions of the final order are: (1) a revenue increase of approximately \$75.5 million, or 4.2% (to be effective April 1, 2005); (2) a limited fuel and purchased power adjustor clause; and (3) the transfer of PWEC Arizona power plants to APS with a bridge purchased power agreement between APS and PWEC while the Federal Energy Regulatory Commission (FERC) approval of the asset transfer is pending. The order provides Pinnacle and APS with regulatory clarity in the near-term. However, it fell short of APS's requests: the rate increase is being implemented almost a year later than expected; the approved rate increase is less than half of the company's original request; and fuel and purchased power recovery is capped at \$776.2 million per year.

In a separate proceeding, the ACC denied APS's request to have its purchase of the Sundance Generating Station (Sundance) recognized as a prudent and pre-approved for inclusion in rate base. Given the growth in APS service territory, APS will likely need to return to the ACC frequently for additional rate actions. The next rate case is likely to be filed before the end of 2005.

### **UNCERTAIN FUTURE FOR COMPETITION IN ARIZONA**

The status and pace of retail electric competition and electric restructuring in Arizona is uncertain, but currently seems to be on hold as it relates to APS and Pinnacle. In 1999, it appeared Arizona would adopt retail electric competition when the ACC approved guidelines that provided a framework for retail competition. The ACC mandated the unbundling of Pinnacle's generation and distribution assets and sought to develop a competitive procurement process, but Arizona's competitive structure never fully developed. While some very limited retail competition existed in APS's service area in 1999 and 2000, there are currently no active retail competitors providing unbundled energy or other utility services to APS customers. While not imminent, the possibility remains that new competitors will enter the APS service territory.

### **GROWING TERRITORY REQUIRES INCREASING AMOUNTS OF CAPITAL EXPENDITURES**

Pinnacle's growing rate base will require increasing capital investment to assure the reliability and adequacy of its transmission, distribution and generation resources. In 2004, Pinnacle's capital expenditures totaled \$598 million. For 2005, 2006 and 2007, capital expenditures are projected to be approximately \$900 million, \$630 million, and \$710 million, respectively. Pinnacle will fund these expenses via a combination of internal and external sources, and will likely need to seek additional rate action in order to maintain its financial strength.

Peak demand in APS's service territory (6,402 MW in 2004) was met with the company's 2004 generating capacity of 6,650 MW, of which 4,006 MW was owned, 844 MW was under long term power purchase agreements, and 1,800 MW were generating assets owned by its affiliate PWEC (which are included in rates and will be transferred to APS after FERC approval). APS also just completed the purchase of Sundance from PPL Corporation for approximately \$190 million. Sundance will add 450 MW to APS's generation capacity. Pinnacle expects that the Sundance purchase, combined with about 1,000 MW of long-term peaking capacity that APS will be seeking through a competitive bidding process later this year, should meet the company's resource needs through 2007.

## **Related Research**

### **Industry Outlook:**

U.S. Electric Utilities, January 2005 (91075)

### **Rating Methodology:**

Global Regulated Electric Utilities, March 2005 (91730)

*To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.*

## **Financial Statement Ratios**

Financial Statement Ratios: Pinnacle West Capital Corporation

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ATTACHMENT DEB-12



**Rating Action: Pinnacle West Capital Corporation**

**MOODY'S AFFIRMS THE DEBT RATINGS OF PINNACLE WEST (Sr. Uns. Baa2) AND ARIZONA PUBLIC SERVICE CO. (Sr. Uns. Baa1);  
OUTLOOK CHANGED TO STABLE FROM NEGATIVE**

**Approximately \$4.0 Billion of Debt Securities Affected**

New York, April 27, 2005 -- Moody's Investors Service affirmed the ratings of Pinnacle West Capital Corporation (Pinnacle: Baa2, senior unsecured) and its subsidiaries Arizona Public Service Company (APS: Baa1, senior unsecured) and Pinnacle West Energy Corporation (PWEC: Baa2, senior unsecured), and changed the rating outlook to stable from negative. In addition, Moody's upgraded the secured lease obligation bonds of PVNGS II Funding Corp., Inc. (PVNGS II) to Baa1 from Baa2. The rating outlook is stable for PVNGS II.

The revision of the rating outlook reflects the projected stabilization of cash flow metrics at both APS and Pinnacle following a recent rate case decision at APS, yesterday's announced equity offering at Pinnacle with expected proceeds of approximately \$250 million, and the expected sale of Pinnacle's ownership interest in the Silverhawk generating facility. By 2006, the ratio of adjusted funds from operations (FFO) to total adjusted debt is projected to be about 20% for APS, which is above Moody's previous expectations. Pinnacle's FFO as a percentage of total adjusted debt is projected to be about 18% in 2006, a level which is also above Moody's previous expectations.

The change in outlook considers the near term rate clarity that has resulted from the conclusion of APS' rate case in March. Although the approved rate increase was less than half of the company's original request, the Arizona Corporation Commission (ACC) decision allowed for a 4.2% increase in retail rates and provided for the inclusion of 1,800 MW of PWEC held generating capacity in APS' rate base. The decision also incorporated an adjustment mechanism for the cost of fuel and purchased power that is expected to positively impact cash flow beginning in 2006.

The change in outlook also reflects the company's demonstrated intent to improve its financial strength by financing a portion of its rising capital expenditures with equity. The proceeds of Pinnacle's equity offering will be used to fund a portion of APS' 2005 capital expenditures, including the purchase of the Sundance plant. Proceeds of the expected Silverhawk sale will also be contributed as equity to APS.

The lease obligation bonds of PVNGS II are secured by payments from APS made in conjunction with its sale leaseback of a portion of the Palo Verde Unit 2 nuclear facility. The upgrade reflects the critical value of the Palo Verde facility in supplying the growing service territory of APS, and recognizes that in the unlikely event of a distress situation, recovery for the lease bonds would likely be similar to the recovery for senior unsecured debt of APS.

Ratings affirmed include:

Pinnacle West Capital Corporation:

- Issuer Rating, senior unsecured debt and syndicated bank credit facility; Baa2,
- Shelf registration for the issuance of senior and subordinate debt securities and preferred stock; (P)Baa2, (P)Baa3, and (P)Ba1 respectively,
- Short term rating for commercial paper; Prime-2.

Arizona Public Service Company:

- Issuer Rating, senior unsecured debt and syndicated bank credit facility; Baa1,
- Shelf registration for the issuance of senior or subordinate debt securities; (P)Baa1 and (P)Baa2 respectively.
- Short term rating for commercial paper; Prime-2.

Pinnacle West Energy Company (rating based upon the guarantee of Pinnacle):

- Senior unsecured debt; Baa2.

Rating upgraded:

- Senior secured lease obligation bonds of PVNGS II, upgraded to Baa1 from Baa2.

Headquartered in Phoenix Arizona, Pinnacle West Capital Corporation provides electric service to a substantial portion of the state of Arizona, sells energy-related products and services, and develops residential, commercial and industrial real estate. Pinnacle conducts its business through subsidiaries. Wholly owned subsidiary Arizona Public Service Company is its principal subsidiary.

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Global Power/North America  
Credit Analysis

## Arizona Public Service Co. Subsidiary of Pinnacle West Capital Corp.

### Ratings

Security Class	Current Rating	Previous Rating	Date Changed
Senior			
Unsecured	BBB+	BBB	5/13/98
Commercial Paper	F2	D-1-	6/1/00

Rating Watch..... None  
Rating Outlook..... Stable

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### Profile

APS, a wholly owned subsidiary of PNW, is the largest utility in Arizona, serving approximately 989,000 customers. In March 2005, the ACC issued a final order in APS's GRC, approving a \$75 million rate hike based on a 10.25% ROE.

#### Key Credit Strengths

- Competitive regional electric rates.
- Attractive utility growth demographics.

#### Key Credit Concerns

- Potential deterioration in state regulatory environment due to upcoming 2006 election.
- High debt relative to current rating category.

### Rating Rationale

Arizona Public Service Company's (APS) recently affirmed credit ratings and Stable Rating Outlook reflect the anticipated positive effect of the Arizona Corporation Commission's (ACC) recent order in the utility's general rate case (GRC). The ACC order will significantly improve APS's business-risk profile, reducing commodity exposure while ameliorating potential contagion risk and rating linkage with its corporate parent, Pinnacle West Capital Corp. (PNW, rated 'BBB' Rating Outlook Stable by Fitch) and PNW's unregulated subsidiaries. Fitch also considers the positive effects of PNW's recently completed common stock offering and planned exit from the merchant-generation business. Proceeds from the common stock offering and expected sale of the Silverhawk generating plant later this year will be used to reduce APS debt and fund utility capital expenditures (capex). The APS ratings and Stable Rating Outlook reflect the utility's relatively predictable cash flow, attractive service territory and solid earnings and cash flow coverage ratios. Fitch also assumes a reasonable outcome in APS's next GRC, which is expected to be filed with the ACC by year-end 2005.

Importantly, the ACC order authorized the transfer of 1,800 megawatts (MW) of unregulated generating capacity owned by PNW's wholly owned subsidiary, Pinnacle West Energy Corp. (PWEC), to APS for inclusion in rate base. The ACC order also approved a power supply adjustor (PSA) to facilitate timely recovery of certain prudently incurred fuel and purchase power costs from ratepayers and a provision prohibiting APS from building new generation through Jan. 1, 2015. However, APS has the ability to build new generation if wholesale power markets fail to provide adequate supply at a reasonable cost.

The anticipated asset transfer will significantly improve the business-risk profile of APS's corporate parent, PNW, lowering the merchant-generating capacity owned by PNW to approximately 425 MW from 2,215 MW. While implementation of the PSA and asset transfer will, in the near term, reduce APS's commodity exposure associated with its obligation to serve utility customers as the provider of last resort, the self-build moratorium through Jan. 1, 2015, is intended to encourage the development of a competitive wholesale energy market in Arizona. The moratorium is designed to shift future risk and opportunity associated with generation development from the utility to unregulated market participants over the longer term.

The recent payment of PWEC's \$500 million secured intercompany note to APS in anticipation of the transfer of 1,800 MW of generating capacity from PWEC to APS eliminated one source of APS rating linkage with PNW and PWEC. APS plans to use the proceeds from the intercompany note to fund the PWEC asset acquisition. Federal Energy Regulatory Commission (FERC) approval will be required to

May 4, 2005

## Arizona Electric Industry Restructuring Timeline

Date	Arizona Electric Industry Restructuring Event	Comment
1999	Restructuring settlement approved by the ACC.	APS was ordered to transfer its generating capacity to an affiliate by 2002, and its rates were capped at lower levels. APS was provided the opportunity to recover stranded costs.
2001	Customer choice began.	All customers were eligible to select alternative providers, but suppliers did not enter the Arizona market on a significant scale, and virtually no customers migrated to new suppliers.
September 2002	The ACC blocked the transfer of APS's generation to PWEC.	In the wake of the western energy crisis of 2000–2001, the ACC effectively halted restructuring to review its policies.
March 2003	The ACC ordered APS to seek competitive bids for energy and capacity supply beginning in July 2003.	The ACC order required APS to seek bids covering the utility's capacity needs in excess of existing resources through 2006.
January 2005	The ACC affirmed APS's authority to build and acquire generation to meet its native load requirements.	The ACC's Sundance decision eliminated a source of uncertainty regarding APS's ability to construct and/or acquire new generating capacity.
March 2005	The ACC authorized transfer of PWEC assets to APS and adopted a PSA and moratorium on self build through Jan. 1, 2015.	The ACC adopted a hybrid approach to review its policies, providing an opportunity for merchant-generation companies to provide the next round of generating capacity.

ACC – Arizona Corporation Commission. APS – Arizona Public Service Company. PWEC – Pinnacle West Energy Corp. PSA – Power supply adjustor.

include the PWEC generation assets in rate base. A FERC order is expected later this year. If the FERC denies transfer of the PWEC assets to APS's rate base, APS plans to enter into a 30-year purchase power agreement (PPA), with PWEC with prices reflecting cost of service as if APS had acquired the PWEC generating plant as rate-base assets.

### ■ Recent Developments

On March 28, 2005, the ACC, in a special open meeting, issued a final order in APS's GRC, adopting a proposed settlement agreement. The ACC-approved settlement was supported by the ACC staff, APS and 20 intervenor groups. In addition to approving the asset transfer and adopting the PSA, the ACC order approved a \$75 million rate increase based on a 10.25% authorized return on equity (ROE). The order approves the transfer of the PWEC generation assets to APS for inclusion in rate base at a value of \$700 million, a 17% discount to the plant's \$848 million book value at year-end 2004. As a result, Fitch expects APS to book a \$148 million pretax charge concomitant with the close of the PWEC asset transfer. The order prohibits APS from building new generating capacity through Jan. 1, 2015. However, APS has the ability to build new generation if wholesale power markets fail to provide adequate power supply at a reasonable cost. ACC permission is required for APS to buy or build new generation.

PNW's just-completed \$256 million common stock offering and its plan to sell its last remaining

merchant-generation asset are constructive developments for APS's fixed-income investors, in Fitch's view. Management is in the midst of negotiations to sell its 75% ownership interest in the 570-MW Silverhawk natural gas fired combined cycle generating plant. This, combined with the transfer of PWEC's Arizona generating capacity, would eliminate PNW's investment in the merchant-generation business.

Separately, the ACC, on Jan. 20, 2005, issued an order that approved APS's acquisition of the Sundance power plant from a subsidiary of PPL Corporation (PPL, rated 'BBB', Rating Outlook Stable by Fitch). The ACC order also confirmed APS's authority to build or purchase a new generating plant to serve its native load. APS entered into the agreement to purchase the 450-MW Sundance combined cycle, natural gas fired power plant from PPL for approximately \$190 million in June 2004. APS has filed with the FERC for approval of the proposed Sundance acquisition. An order is expected by the end of the second quarter of 2005.

### ■ Liquidity, Debt Structure and Capex

At Dec. 31, 2004, APS had cash and investments totaling \$231 million and no short-term debt outstanding. APS has a \$325 million revolving credit facility in place that can be used as a backstop for the issuance of up to \$250 million of commercial paper. The credit facility matures in May 2007. The utility's debt to operating cash flow, including off-balance-sheet debt, at year-end 2004 was 4.3 times (x).

Projected APS capex during the 2005–2007 period are expected to peak at \$772 million in 2005, falling to \$560 million and \$641 million, respectively, in 2006 and 2007. Fitch expects approximately 70% of APS's total 2006 and 2007 capex to be invested in its delivery business and the remainder primarily in generation. Proceeds from the anticipated 2005 sale of PWEC's Silverhawk generating plant and PNW's recently completed common stock offering are expected to be used by PNW to reduce debt and fund APS's capital program. Fitch expects APS's 2006 and 2007 capital requirements to be fully funded by operating cash flow.

On April 11, 2005, PWEC issued \$500 million of floating-rate notes in a private placement that are callable in six months and mature October 2007. The notes are guaranteed by PNW. Proceeds from the offering were used to repay PWEC's secured five-year, intercompany note issued to APS in 2003. APS will use the proceeds to acquire 1,800 MW of PWEC generating capacity following assumed FERC approval later this year.

### ■ General Rate Case

APS filed its GRC in June 2003, requesting a \$175 million (9.8%) rate increase based on an 11.5% authorized ROE. The rate filing sought to add to APS's rate base approximately 1,800 MW of PWEC capacity that was built to meet APS's load during the utility's competition transition period, which was halted by the ACC in 2002 (see the following Restructuring Issues section). The filing also requested implementation of a fuel and purchase power cost recovery mechanism.

APS and nearly all of the major intervenors, including ACC staff, reached a settlement proposing a \$75 million (4.2%) rate increase based on a 10.25% authorized ROE. Under the terms of the stipulation, APS would acquire approximately 1,800 MW of PWEC generating capacity for inclusion in rate base at a value of \$700 million, which would result in a disallowance of \$148 million pretax (\$88 million after tax). In addition, the stipulation provides for the recovery of fuel and purchased power costs through an automatic power supply adjustment mechanism and bars APS from building new generation through Jan. 1, 2015. On March 28, 2005, the ACC issued a final order in APS's GRC, adopting the proposed settlement with some adjustments.

### Outlook Rationale

APS's Stable Rating Outlook reflects lower commodity risk exposure and lessened concern regarding parent linkage and potential contagion issues. The Stable Outlook also reflects the utility's relatively predictable cash flow, attractive service territory, and solid earnings and cash flow coverage ratios.

### What Could Lead to Positive Rating

#### Action?

- Debt reduction in excess of current expectations.

### What Could Lead to Negative Rating

#### Action?

- PSA termination and/or deterioration in the regulatory environment.

In Fitch's view, ACC approval of the settlement is a positive event for APS's fixed-income investors that will significantly improve the utility's risk profile through the adoption of the PSA and transfer and ultimate inclusion of the PWEC generating assets in base rates. The asset transfer will end the utility's financial support for PWEC's unregulated generation and will ease potential parent contagion concern through the significant reduction of PNW's competitive generation investment.

The ACC order also signals commission support for secular development of a competitive wholesale power supply market in Arizona and continued support for passthrough of the lion's share of power supply costs to customers. Nonetheless, the ultimate success of the commission's efforts to develop a robust wholesale market place, the structure of power supply in the state and the utility's role in power procurement are expected by Fitch to evolve slowly and remain subject to significant uncertainty.

Less constructive elements of the ACC-approved settlement are the disallowance of \$148 million of the book value of the PWEC generating plant, a relatively low authorized ROE and a revenue increase that is less than one-half of APS's original request.

Under the terms of the ACC-approved settlement, APS and PWEC will enter into a PPA from the effective date of the rate increase to the actual date of the asset transfer, which will be subject to FERC

approval. If the FERC were to reject the APS request to approve the transfer of the PWEC assets, the bridge PPA would become a 30-year PPA, with prices reflecting cost of service as if APS had acquired and rate based the PWEC generating plant.

### ■ Restructuring Issues

In 2002, the ACC rescinded a major component of APS's 1999 electric industry restructuring settlement agreement by eliminating the required transfer of the utility's regulated generation assets to an unregulated subsidiary. The ruling created major uncertainty regarding the structure of electricity markets in Arizona.

Subsequently, the ACC's January 2005 order approving the Sundance natural gas fired generating plant acquisition by APS confirmed the utility's authority to build or purchase a new generating plant to serve its native load.

With the March 2005 ACC order in APS's GRC, the state has migrated to a hybrid model that relies on an integrated utility structure while providing the potential for development of a robust wholesale power market to supply customer needs over time. Importantly, the adoption of the PSA and transfer of the PWEC assets are, in Fitch's view, constructive developments that enhance APS's risk profile and creditworthiness.

Customer choice was initiated in Arizona in 2001; however, alternative suppliers have not been active on a significant scale in APS's service territory, and virtually no customers have migrated to alternative energy suppliers. The table on page two of this report summarizes select events in Arizona's electric industry restructuring process.

## Financial Summary — Arizona Public Service Co.

(\$ Mil., Fiscal Years Ended Dec. 31)

	2004	2003	2002	2001
<b>Fundamental Ratios</b>				
Operating EBIT/Interest Expense (x)	3.0	2.6	3.5	4.5
Operating EBITDA/Interest Expense (x)	5.3	5.3	6.4	7.7
Debt/Operating EBITDA (x)	3.5	3.4	2.6	2.2
Common Dividend Payout (%)	85.2	94.0	85.3	64.0
Internal Cash/Capital Expenditures (%)	106.7	142.4	109.0	93.5
Capital Expenditures/Depreciation (%)	152.6	109.5	122.6	110.6
<b>Profitability</b>				
Revenues	2,197	2,105	1,936	3,111
Net Revenues	1,434	1,402	1,465	1,570
Operating and Maintenance Expense	540	514	496	466
Operating EBITDA	779	779	862	1,004
Depreciation and Amortization Expense	337	389	400	421
Operating EBIT	443	390	462	583
Interest Expense	147	148	134	131
Net Income for Common	200	181	199	265
Operations and Maintenance Expense % of Net Revenues	37.7	36.6	33.8	29.7
Operating EBIT % of Net Revenues	30.9	27.8	31.5	37.1
<b>Cash Flow</b>				
Net Operating Cash Flow	718	777	705	605
Dividends	(170)	(170)	(170)	(170)
Capital Expenditures	(514)	(426)	(490)	(465)
Free Cash Flow	34	181	44	(30)
Net Other Investment Cash Flow	(119)	(583)	30	(57)
Net Change in Debt	92	402	(48)	101
<b>Capital Structure</b>				
Short-Term Debt	451	487	4	297
Long-Term Debt	2,267	2,136	2,217	1,949
Total Debt	2,718	2,623	2,221	2,246
Preferred and Minority Equity	0	0	0	0
Common Equity	2,232	2,204	2,159	2,151
Total Capital	4,951	4,826	4,380	4,396
Total Debt/Total Capital (%)	54.9	54.3	50.7	51.1
Preferred and Minority Equity/Total Capital (%)	0.0	0.0	0.0	0.0
Common Equity/Total Capital (%)	45.1	45.7	49.3	48.9

Operating EBIT — Operating income plus total reported state and federal income tax expense. Operating EBITDA — Operating income plus total reported state and federal income tax expense plus depreciation and amortization expense. Notes: 1. Numbers may not add due to rounding. 2. Numbers are adjusted for interest and principal payments on transition property securitization certificates. 3. Long-term debt includes trust preferred securities. Source: Financial data obtained from SNL Energy Information System, provided under license by SNL Financial, LC of Charlottesville, Va.

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## RESEARCH

### Research Update: Outlook On Pinnacle West Capital Corp. And APS's Ratings To Stable On Resolution Of Rate Case

#### Current Ratings >>

**Publication date:** 01-Apr-2005  
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**Credit Rating:** BBB/Stable/A-2

#### Rationale

On April 1, 2005, Standard & Poor's Ratings Services revised the outlook to stable from negative and affirmed the ratings on Pinnacle West Capital Corp. (PWCC) and Arizona Public Service Co. (APS), the company's wholly owned electric utility, reflecting the long-awaited resolution of APS' general rate case.

The Arizona Corporation Commission (ACC) voted 4-1 on March 28, 2005 to adopt with few changes the terms of a settlement agreement negotiated by 21 of 22 parties in August 2004 and thereby resolve many of the issues that have challenged the consolidated credit quality of PWCC and APS.

Among the most significant benefits of the settlement is the rate-basing of 1,790 MW of generation that is currently owned by Pinnacle West Energy Corp (PWEC), PWCC's nonregulated wholesale generation subsidiary. The assets will be transferred at a value of \$700 million, which represents a disallowance of approximately \$148 million. As a result, PWEC's merchant plant ownership will drop from about 2,200 MW of nameplate capacity to about 425 MW, significantly lowering the business risk profile of PWCC.

The transfer will require the approval of the FERC, which must assess the extent to which APS could exert regional market power if the rate-basing is approved. Until FERC authorization is granted, APS and PWEC will enter into a cost-based power purchase agreement (PPA), which will be extended to 30 years in the event that the FERC rejects APS' request. If the rate-basing is rejected, the PPA is structured to mimic the benefits that would otherwise accrue to PWCC and APS under rate-basing. Because load growth in APS' service territory is projected to grow between 4%-6% per year over the next five years, APS will still need an additional 1,200 MW by the summer of 2007 to fill the gap between power supply and demand.

The substantial reduction in PWEC's operations, combined with PWCC management's demonstrated commitment to scale back the activities of its

three other unregulated subsidiaries--SunCor, El Dorado and APS Energy Services--has resulted in an improved consolidated business profile score of '5' from a '6', based on Standard & Poor's 10-point scale, where '1' represents the strongest profile. APS' business profile of '5' is unchanged.

The ACC also approved a 4.21% increase in base electric rates, which will go into effect April 1, 2005. This rate increase, along with other measures management has taken, are expected to be sufficient to maintain credit metrics in the 'BBB' category. However, because the rate increase falls short of the original 9.8% rate increase sought by the utility, it is likely that APS will need to file a new rate case in the next several years. The utility faces continued regulatory challenges in seeking rate relief. The authorization of a fuel and purchased power mechanism, called the Power Supply Adjuster (PSA), is expected to provide only modest protection to the utility in the interim because of structural weaknesses in its design. Specifically, base fuel and purchased power costs are set at 2.1 cents/kilowatt-hour (kWh), a level that is low relative to APS' projected fuel costs. While APS may request annually that the PSA be used to collect fuel, purchased power, and hedging costs in excess of this base rate, any authorized increases are capped at 4 mills/kWh over the life of the PSA. APS expects it will reach the 4 mill limit in the first year. An additional limitation exists that caps APS' total fuel costs in any calendar year to \$776 million. APS may not collect through the PSA any expenses that exceed this amount, but instead must file a rate case with the ACC. The 21-month resolution of the current rate case, which APS originally filed in June 2003, indicates that APS may not be able to rely on rate cases to provide timely adjustments to the base fuel and power purchase rate.

The decision does give the ACC the ability to establish an additional surcharge for fuel and purchased power costs outside of the annual PSA calculation. APS must notify the ACC if power and fuel cost deferrals exceed \$50 million on its balance sheet, and if deferrals rise to \$100 million, the ACC may elect to implement a surcharge in addition to the PSA. But the requirement for the ACC to do so, and the timing of its actions, as well as the amortization of cost recovery it would elect in such an instance, are uncertain.

APS has hedged approximately 75% of its natural gas needs for 2005 and approximately 40% for 2006, which mitigates the exposure that the utility will have under the PSA in the short term. However, over time, it is likely that APS will need a stronger PSA to maintain its current credit ratings, particularly given the expectation that over the next five years APS' fuel mix will become heavily concentrated in natural gas.

### **Short-term credit factors**

PWCC's liquidity is adequate, and as of March 31, 2005, PWCC's consolidated cash and cash equivalents position was approximately \$250 million. This very strong cash position is due largely to APS' issuance of \$300 million in notes in June 2004 in order to prefinance about \$400 million in utility obligations due in January and August 2005.

Both PWCC and APS maintain CP programs. Neither program had any CP balances as of March 31, 2005. PWCC's program is for \$250 million and is supported by a three-year, \$300 million credit facility that PWCC put into place in October 2004. The revolver allows PWCC to use up to \$100 million of the facility for letters of credit. The

revolver has no material adverse change clauses pertaining to outstanding CP balances.

APS maintains a \$250 million CP program. In May 2004, APS renegotiated its revolver and increased the size to \$325 million. Also a three-year term, the facility supports the utility's CP program and provides another \$75 million for other liquidity needs, including letters of credit. The supporting facility has no material adverse change clauses pertaining to outstanding CP balances.

The revolvers do not have any termination triggers tied to credit downgrades, but they do have restrictive covenants, including interest coverage and leverage tests. The agreements also have cross-default provisions.

### Outlook

The stable outlook reflects the expectation that PWCC will continue to focus on the regulated operations of APS, which is projected to contribute more than 85% of its funds from operations in 2005. The failure of PWCC or APS to meet expected financial results in 2005 and 2006, particularly in light of the weakening in consolidated and utility credit metrics in 2004, could lead to a downward revision of the outlook or a ratings change. Downward pressure on the ratings will occur if APS incurs significant power or fuel cost deferrals in excess of the PSA's limitations. Any positive rating action is unlikely in the near-term given the financial metrics and the longer term risks that the terms of the PSA present.

### Ratings List

	To	From
Pinnacle West Capital Corp.		
Corporate credit rating	BBB/Stable	BBB/Negative
Senior unsecured debt	BBB-	
Commercial paper	A-2	
Arizona Public Service Co.		
Corporate credit rating	BBB/Stable	BBB/Negative
Senior unsecured debt	BBB	
Commercial paper	A-2	

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# RESEARCH

## Summary: Arizona Public Service Co.

### Current Ratings >>

#### Publication date:

04-Oct-2005

#### Primary Credit Analyst:

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**Credit Rating:** BBB/Stable/A-2

### **Rationale**

Arizona Public Service Co. (APS) is a wholly owned subsidiary of Pinnacle West Capital Corp. (PWCC), and the most significant company within the PWCC family. PWCC's satisfactory business profile (a '5' on a 10-point scale where '1' is excellent) reflects the vertically integrated utility operations of APS and the absence of significant non-regulated businesses within PWCC.

APS' credit strengths include a Phoenix service territory that is the second-fastest growing region in the U.S. (behind Las Vegas), a diversified power supply portfolio, and a 4.21% increase in retail rates that began on April 1, 2005 in conjunction with the settlement of the utility's general rate case in March 2005. This increase had been expected to modestly shore up a financial performance that has been weakening over the past several years.

However, challenges are increasing for the utility, and performance on a 12-month rolling basis ended June 30, 2005 indicates that the utility is pressured by the rising costs of purchased power and natural gas. The addition of a fuel and purchased power cost adjuster to retail rates has not assisted APS in timely receipt of cash because revisions occur only in the spring of each year, with the first opportunity arising in April 2006. The settlement provides for the use of a surcharge filing to provide the utility with an interim vehicle for recovering costs if they exceed \$50 million. As anticipated, APS did accrue this level of deferrals over the summer. Through June 30, 2005, purchased power and fuel costs totaled \$401 million, of which \$34 million was deferred. At Aug. 31, 2005, the deferred balance had increased to \$117 million. The company's estimates of total fuel and purchased power costs in 2005 are confidential, but as a basis of comparison, in 2004 the utility spent \$763 million. In July 2005, APS filed an application with the Arizona Corporation Commission (ACC) requesting that it be allowed to recover \$100 million through a two-year surcharge that would increase rates by about 2.2%.

Both the pace and disposition of this proceeding will be critical to credit quality. The ACC staff and at least one commissioner have questioned whether the utility should be allowed to collect \$20 million of the \$100 million requested the former being the amount roughly associated with Palo Verde replacement power costs during four months from April through July 2005. (Since then, Units 1 and 2 suffered outages in late August.) In late September, the company announced that to expedite an ACC decision, it would reduce its request for surcharge recovery to \$80 million and address the \$20 million in deferred costs in a later proceeding. The ACC has established a schedule for the proceeding to address the \$80 million, with hearings to begin Oct. 26, 2005.

For fiscal 2005, the company continues to expect it will achieve results in line with credit metrics needed to support the current rating. And in April 2006, the utility will be able to receive additional relief through the annual fuel and purchased power adjustment mechanism. But upward adjustments are limited to 4 mills/kWh over the life of the adjuster. Because existing retail rates are based on 2003 costs, reflecting gas prices of about \$5.50/MMBtu, the company expects the entire 4 mill headroom will be utilized at the first reset. The utility is expected to file another rate case by the end of 2005, but its resolution could extend well into 2006. Thus, it is clear that timely near-term cost collection will be the key driver of credit quality. Standard & Poor's is becoming increasingly concerned with the utility's ability to achieve this. A relatively weak power supply adjustment mechanism, in combination with rapidly escalating and volatile gas prices, as well as the potential for a protracted surcharge proceeding, could cause deterioration in financial performance which, year to date, has been sub par for the rating.

Whether the company's consolidated targets will be met will largely be a function of APS' third-quarter results. For the 12 months ending June 30, 2005, consolidated adjusted funds from operations (FFO) to total debt was 12.7%, but this reflects a one-time deferred tax charge taken in December 2004 based on the expectation that APS may need to refund \$130 million at the end of 2005. Excluding the deferral, adjusted FFO/total debt is closer to 15.5%. FFO to interest coverage was 3.0x for the 12 months ending June 30, or 3.5x when the deferred tax obligation is excluded. Adjusted debt to total capitalization was 55.7% and benefited from PWCC's April issuance of \$250 million in equity.

APS' general rate case settlement allowed for the rate-basing of 1,790 MW of Arizona generation formerly owned by Pinnacle West Energy Corp (PWEC), PWCC's merchant generation subsidiary. In July 2005, PWEC transferred this generation capacity, through five plants, to APS. PWCC has also announced that it plans to sell its remaining 75% interest in Silverhawk, a 570 MW plant near Las Vegas, Nev., to Nevada Power (NPC; B+/Positive/NR) for \$208 million. If Nevada regulators approve the sale, the transaction should be completed by the end of 2005 and mark the complete wind-down of PWEC operations. Consolidated credit benefited from the transfer by reducing merchant exposure in providing APS with needed supply to meet its growing loads.

### Short-term credit factors

PWCC's short-term rating is 'A-2'. The rating is supported by the fact that the preponderance of cash flows is produced by APS, a vertically integrated electric utility. Near-term liquidity is adequate to support power purchase expenses that exceed rates. Because APS is heading into its shoulder season, when demand for electricity for space cooling drops significantly, the build-up of its power cost deferrals should slow. APS has hedged nearly all of its power and gas purchases through the remainder of 2005 and about 80% in 2006, thus its cost projections should be in line with realizations. Consolidated cash and investments stood at more than \$900 million as of Sept. 31, 2005. However, \$500 million was used on Oct. 3, 2005 to call the Pinnacle West Energy Company's floating-rate notes due April 2007. Also impacting the cash and invested position is the increased amount of collateral held under hedging contracts.

Both PWCC and APS maintain CP programs. Neither program had any CP balances as of June 30, 2005. PWCC's program is for \$250 million and is supported by a three-year, \$300 million credit facility that expires in October 2007. The revolver allows PWCC to use up to \$100 million of the facility for letters of credit. The revolver has no material adverse change clauses pertaining to outstanding CP balances.

APS' short-term rating is also 'A-2'. The rating is supported by the stability of cash flows from regulated operations and good liquidity, although APS will need to continue to rely on borrowings to fund portions of its capital expenditure program, which is expected to be about \$770 million in 2005 (and includes \$190 million for the purchase of the Sundance power plant), up significantly from \$484 million in 2004. APS maintains a \$250 million CP program. In May 2004, APS renegotiated its revolver and increased the size to \$325 million. This facility, also a three-year term, expires in May 2007, supports the utility's CP program, and provides an additional \$75 million for other liquidity needs, including letters of credit. The supporting facility has no material adverse change clauses pertaining to outstanding CP balances.

### Outlook

The stable outlook reflects Standard & Poor's expectation that the ACC will resolve APS' large deferred power costs through a surcharge ruling no later than year-end that supports timely recovery of the \$80 million request. In addition, the outlook presumes that third-quarter consolidated financial results will reflect improvements that demonstrate

modest advances in credit metrics. An adverse outcome in either of these areas will result in a negative outlook. No positive ratings changes are expected in short-term.

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# RESEARCH

## Arizona Public Service Co.

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### Corporate Credit Rating

<b>Outstanding Rating(s)</b>	BBB-/Stable/A-3
<b>Arizona Public Service Co.</b>	
Sr unsec'd debt	
Local currency	BBB-
CP	
Local currency	A-3
<b>Pinnacle West Capital Corp.</b>	
Corporate Credit Rating	BBB-/Stable/A-3
Sr unsec'd debt	
Local currency	BB+
CP	
Local currency	A-3
<b>PVNGS II Funding Corp. Inc.</b>	
Corporate Credit Rating	BBB-/Stable/--
Sr unsec'd debt	
Local currency	BBB-
<b>Corporate Credit Rating History</b>	
Nov. 4, 2002	BBB/A-2
Dec. 21, 2005	BBB-/A-3

### Major Rating Factors

#### Strengths:

- Arizona Public Service (APS) represents the preponderance of Pinnacle West Capital Corp.'s (PWCC) cash flows and is the basis for the consolidated creditworthiness
- Strong energy sales and peak load growth rates are roughly twice the national average growth rate for investor-owned utilities, or about 4% per annum
- PWCC exited the merchant generation business in early 2006, thereby improving its business risk profile



### Weaknesses:

- The consolidated financial profile has been deteriorating since 2003 due principally to protracted regulatory proceedings that have resulted in retail base rates that are insufficient to recover current costs
- Cost deferrals related to elevated natural gas prices and purchased power costs are growing largely due to a weak power and fuel adjustment mechanism
- A series of operational problems at the Palo Verde nuclear units has increased power purchase requirements in a high wholesale power price environment
- APS is increasingly dependent on natural gas to meet service area growth
- Utility capital expenditures are expected to increase to nearly \$2 billion from 2005 through 2007, compared with historic spending of \$1.4 billion from 2002 through 2004, and regulatory support for timely recovery has become increasingly uncertain

### Rationale

APS' 'BBB-' corporate credit rating is based on the consolidated credit quality of PWCC, of which APS is the principal subsidiary. APS is a vertically integrated investor-owned utility that provides retail electric service to about one million customers throughout Arizona, including about half of the Phoenix MSA. PWCC's unregulated subsidiaries contributed about 24% of consolidated cash flows in 2004, and have become marginal to overall creditworthiness. PWCC's business profile is satisfactory ('6' on a 10-point scale, where '10' is the weakest).

A strong and diversified Phoenix economy has fueled significant utility growth, and a large residential base that accounted for 50% of APS' retail electric sales in 2004 provides stability. On the other hand, regulatory risk has increased, reflected in uncertainty related to the recovery of rising fuel and purchased power costs and in APS' significant pending general rate case, in which the company is requesting a 21.3%, or \$453.9 million, rate increase.

Regulatory uncertainty is exacerbated by the establishment in 2004 of a weak power supply adjuster (PSA) that exposes the utility to potential cash flow volatility. APS has been forced to defer \$170 million of fuel and purchased power costs at the end of 2005, an amount that may grow to as large as \$250 million by the end of 2006. Finally, while a ruling in the company's general rate case could avoid future deferrals, general rate cases typically take significant time to process; APS' last rate case took nearly 23 months to resolve.

The company has therefore sought interim rate relief of \$299 million, or about 14%. The request is roughly the portion of its total rate case request that is attributable to fuel and purchased power. If granted, the emergency rate relief would advance to the utility through higher rates the amounts needed to avoid significant additional deferrals. Any amounts, if authorized by the Arizona Corporation Commission (ACC), would be subject to future prudence review. A ruling is expected in April.

In January 2005, the ACC approved a \$111 million increase, beginning Feb. 1, 2006, to collect a portion of the 2005 deferral balance. Separately, in February 2006, APS filed to recover \$59.9 million in fuel and purchased power costs deferred by APS in 2005. The combined surcharges would represent a temporary rate increase of approximately 2.6% during the overlapping portion of the 12-month recovery periods for the two surcharges.

### Short-term credit factors

Because of significant CP programs at APS and PWCC, near-term liquidity should be adequate to support cash outlays for power and fuel not recoverable in current rates. PWCC's \$250 million program is supported by a five-year \$300 million credit facility that expires in December 2010. The revolver allows PWCC to use up to \$100 million of the facility for LOCs. The revolver has no material adverse change clauses. APS maintains a \$250 million CP program supported by a five-year, \$400 million revolver that expires in December 2010. This revolver also provides an additional \$150 million for other liquidity needs, including \$100 million for letters of credit. The supporting facility has no material adverse change clauses. Neither program had any balance as of Dec. 31,

2005.

Consolidated cash and investments stood at more than \$900 million as of Sept. 30, 2005. However, \$500 million was used on Oct. 3, 2005, to call Pinnacle West Energy Corp.'s floating-rate notes that were due April 2007. Also affecting the cash and invested position is the increased amount of collateral held under bilateral contracts.

APS is in its winter season when demand drops significantly and the build-up of its power cost deferrals should slow; however, the reduced operational capacity of Palo Verde Unit 1 to about 25% has resulted in unanticipated replacement power costs. PWCC has a \$300 million maturity on April 1, 2006, which it plans to refinance. Adverse regulatory actions could affect the costs of borrowing or even access to the capital markets, although this is not currently seen as a significant threat.

## Outlook

The stable outlook is premised on the ACC providing sustained regulatory support that adequately addresses the growing deferrals at APS. Negative rating actions could result if timely regulatory support is not sustained, or if market forces or operational issues lead to significant increases in the expected 2006 deferral level. There is limited opportunity for positive rating actions while the current commission is seated.

## Accounting

PWCC's financial statements are audited by Deloitte and Touche LLC, which provided an unqualified opinion for fiscal 2004. The company may update its published financial results from previous years as required by accounting standards. These updates can give rise to modest revisions of previous year results. Standard & Poor's utilizes the most up-to-date results published by the company for previous years. For this reason, there may be small changes in the metrics it publishes for a particular year in subsequent years.

Standard & Poor's makes several adjustments to PWCC's financial statements. In 1986, APS sold about 42% of Palo Verde Unit 2 as part of a sale-leaseback transaction. Including this transaction, and other operating leases, Standard & Poor's computed an off-balance sheet obligation of \$524 million in 2004. The lease expires in 2015. The company has a small amount of power purchased obligations, which generates an off-balance-sheet adjustment of about \$45 million.

In the third quarter of 2005, PWCC realized significant proceeds from real estate sales. In the past, Standard & Poor's has accounted for real estate cash flows as presented by the company, in which cash inflows and outflows from SunCor commercial sales are presented as a component of cash flows from investing activities. However, cash inflows and outflows related to SunCor residential projects are presented on a net basis within cash flows from operating activities. To recognize about \$82 million in proceeds from commercial real estate investments, Standard & Poor's has included this amount in operating cash flows for 2005 results. At the same time, Standard & Poor's has removed from operating cash flows changes in trading assets and liabilities that constitute margin account inflows to the company, the majority of which are incurred by APS.

Table 1 Pinnacle West Capital Corp. Peer Comparison				
Average of past three fiscal years				
(\$ in millions)	Pinnacle West Capital Corp.	Tampa Electric Co.	UniSource Energy Corp.	DTE Energy Co.
Rating	BBB-/Stable/A-3	BBB-/Stable/A-3	BB/Negative/B-2	BBB/Stable/A-2
Business Profile	6	4	6	6
Sales	2,688.2	1,999.4	991.9	6,968.0
Net income from continuing operations	211.1	164.4	41.4	518.3
Funds from operations (FFO)	733.4	408.4	220.9	909.6
Capital expenditures	720.3	391.2	138.0	869.7

Cash and equivalents	124.0	13.9	115.4	81.0
Total debt	3,311.0	1,556.2	1,849.9	7,245.7
Preferred stock	0.0	0.0	0.0	0.0
Common equity	2,822.0	1,717.3	519.5	5,133.3
Total capital	6,133.1	3,273.5	2,369.4	12,475.0
<b>Ratios</b>				
Adjusted EBIT interest coverage (x)	2.4	3.6	1.4	1.7
Adjusted FFO interest coverage (x)	4.1	5.1	2.4	2.8
Adjusted FFO/average total debt (%)	19.8	27.1	11.9	11.9
Net cash flow/capital expenditures (%)	83.0	60.5	142.1	57.9
Adjusted total debt/capital (%)	58.0	47.7	78.2	60.3
Return on common equity (%)	6.4	8.4	8.2	10.2
Common dividend payout (%)	73.0	103.8	47.4	66.8

Table 2 Arizona Public Service Co. Financial Summary					
Industry Sector: Regulated T&D--Electric					
Fiscal year ended Dec. 31					
(\$ in millions)	2004	2003	2002	2001	2000
Rating history	BBB/Negative/A-2	BBB/Stable/A-2	BBB/Stable/A-2	BBB+/Stable/A-2	BBB+/Stable/A-2
Sales	2,197.1	2,104.9	1,936.2	3,111.3	2,934.1
Net income from continuing operations	199.6	180.9	199.3	280.7	306.6
Funds from operations (FFO)	407.9	653.2	783.8	562.5	695.6
Capital expenditures	513.7	426.3	490.2	465.4	464.4
Cash and equivalents	49.6	42.2	42.5	16.8	2.6
Total debt	2,718.3	2,622.7	2,220.8	2,245.7	2,139.3
Preferred stock	0.0	0.0	0.0	0.0	0.0
Common equity	2,232.4	2,203.6	2,159.3	2,150.7	2,119.8
Total capital	4,950.7	4,826.3	4,380.2	4,396.4	4,259.0
<b>Ratios</b>					
Adjusted EBIT interest coverage (x)	2.7	2.3	2.8	3.7	3.7
Adjusted FFO interest coverage (x)	3.2	4.5	5.5	4.3	4.7
Adjusted FFO/average total debt (%)	13.9	23.0	28.7	21.2	26.1
Adjusted net cash flow/capital expenditures (%)	49.0	111.6	128.6	72.8	117.3
Adjusted total debt/capital (%)	59.7	59.1	56.4	57.2	55.8
Return on common equity (%)	8.5	7.3	8.5	12.4	14.4
Common dividend payout (%)	85.2	94.0	85.3	60.6	55.4

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# RESEARCH

## Summary: Arizona Public Service Co.

Current Ratings >>

**Publication date:** 06-Jan-2006  
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**Credit Rating:** BBB-/Stable/A-3

### Rationale

Arizona Public Service Co. (APS) continues to accumulate deferred fuel and purchased power costs, making the need for rate relief increasingly critical for the credit ratings of the company and its parent, Pinnacle West Capital Corp (PWCC). On Jan. 4, 2006, an administrative law judge (ALJ) at the Arizona Corporation Commission (ACC) recommended in a draft decision that the ACC deny APS' summer 2005 request to recover \$80 million of these costs by implementing a two-year special surcharge. The surcharge would raise retail rates by less than 2%.

Importantly, the ALJ recommendation did not reject the company's ability to recoup these costs in a surcharge. Rather, based on several technicalities, the draft decision concludes that the utility should not be able to implement a surcharge until after its first power supply adjuster (PSA) is implemented. In turn, under the terms of APS' 2005 rate case settlement, a PSA adjustment to retail rates cannot occur until April 2006. This means that if the ACC adopts the ALJ's recommendation, surcharge relief might not occur before summer 2006.

Standard & Poor's Ratings Services last month lowered the corporate credit rating of APS and PWCC by one notch, to 'BBB-', based on concerns that the regulatory process in Arizona is not providing the company timely recovery of fuel and purchased power costs. Irrespective of the merits of the technicalities in the ALJ's recommendation, the draft decision, if implemented, will compound a mounting deferral problem that is severely straining cash flows.

Even if APS' surcharge request had been adopted and implemented in January 2006, as Standard & Poor's had expected, the \$80 million in surcharge rate relief would address a mere fraction of the utility's growing deferrals. At year-end 2005, APS had about \$150 million of these costs on its balance sheet. By year-end 2006, an additional \$265 million or more could be incurred.

The ACC is not bound to adopt the draft decision. For this reason, the ACC's vote on the recommendation will be a more critical indication of the regulatory stance toward the company's request. A vote on the decision is expected in the near term.

Mitigating concern over the draft ruling is the ACC's stated willingness to consider a request for

emergency rate relief. Prompt action by the ACC on such an emergency application would provide another meaningful vehicle to deliver near-term rate relief. Precedent indicates that emergency applications in Arizona are typically reviewed within 90 days. But because there is no express deadline, uncertainties will continue for the company even if such a filing is made.

### Short-term credit factors

PWCC's short-term rating is 'A-3'. The rating is supported by the preponderance of cash flows being produced by APS, a vertically integrated electric utility. Because of APS's sizable CP program, near-term liquidity should be adequate to support cash outlays for power and fuel not recoverable in rates. And, because APS is heading into its winter season when demand drops significantly, the build-up of its power cost deferrals should slow. APS has hedged 85% of its 2006 power and gas requirements, and about 65% for 2007.

Consolidated cash and investments stood at more than \$900 million as of Sept. 30, 2005. However, \$500 million was used on Oct. 3, 2005 to call Pinnacle West Energy Corp.'s (PWEC) floating-rate notes that were due April 2007. Also affecting the cash and invested position is the increased amount of collateral held under bilateral contracts.

PWCC and APS maintain CP programs. Neither program had any balance as of Dec. 31, 2005. PWCC's program is for \$250 million and is supported by a five-year, \$300 million credit facility that expires in December 2010. The revolver allows PWCC to use up to \$100 million of the facility for letters of credit. The revolver has no material adverse change clauses.

APS's short-term rating is also 'A-3'. This rating is supported by the stability of cash flows from regulated operations and good liquidity, although APS will need to continue to rely on borrowings to fund portions of its capital expenditure program, which is expected to be about \$800 million in 2005 (and includes \$190 million for the purchase of the Sundance power plant), up significantly from \$484 million in 2004. APS maintains a \$250 million CP program. APS has a five-year, \$400 million revolver that expires in December 2010 that supports its CP program; this revolver also provides an additional \$150 million for other liquidity needs, including \$100 million for letters of credit. The supporting facility has no material adverse change clauses. Consolidated maturities are modest and consist of \$384 million in 2006, of which \$300 million is a note at the parent that is due in April. Currently, there are virtually no obligations due in 2007, as PWEC called at par in early October some \$500 million in notes that it issued in April 2005 to retire an inter-company loan between PWEC and APS that was associated with the PWEC assets now owned by APS.

### Outlook

The stable outlook reflects Standard & Poor's expectation that the ACC will move promptly to address APS' need for rate relief in light of steadily increasing fuel and purchased power deferrals. In the absence of such action, an adverse rating action or a change in the outlook is likely. The company has the option to file an emergency application for rate relief, and if it does so, Standard & Poor's will consider not only the surcharge application, but also the ACC's response to the emergency filing. Other important proceedings include the company's PSA application and the revised general rate case, which the company is expected to re-file by the end of January 2006.

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**Credit Opinion: Arizona Public Service Company**

**Arizona Public Service Company**

*Phoenix, Arizona, United States*

**Ratings**

Category	Moody's Rating
Outlook	Rating(s) Under Review
Issuer Rating	*Baa1
Sr Unsec Bank Credit Facility	*Baa1
Senior Unsecured	*Baa1
Subordinate Shelf	*(P)Baa2
Commercial Paper	P-2

**Parent: Pinnacle West Capital Corporation**

Outlook	Rating(s) Under Review
Issuer Rating	*Baa2
Sr Unsec Bank Credit Facility	*Baa2
Senior Unsecured	*Baa2
Subordinate Shelf	*(P)Baa3
Preferred Shelf	*(P)Ba1



\* Placed under review for possible downgrade on January 10, 2006

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## Key Indicators

### Arizona Public Service Company

	[1][2]3Q05 LTM	[1]2004	2003	[1]2002
Funds from Operations / Adjusted Debt [3]	12.1%	13.4%	21.3%	28.5%
Retained Cash Flow / Adjusted Debt [3]	9.3%	8.0%	15.7%	22.2%
Common Dividends / Net Income Available for Common	50.8%	85.2%	94.0%	85.3%
FFO + Adjusted Interest / Adjusted Interest [4]	3.09	3.44	4.81	5.81
Adjusted Debt / Adjusted Capitalization [3][5]	49.6%	58.4%	58.2%	55.4%
Net Income Available for Common / Common Equity	5.5%	8.9%	8.2%	9.2%

[1] Includes the impact of a tax refund in 2002 and tax reversal in 2004. [2] FFO excludes the impact of cash collateral from others in risk management and trading liabilities. [3] Debt is adjusted to reflect operating leases. [4] Adjusted Interest includes adjustment made for operating leases. [5] Adjusted Capitalization reflects the adjusted debt

*Note: For definitions of Moody's most common ratio terms please see the accompanying User's Guide.*

## Opinion

### Credit Strengths

Credit strengths for Arizona Public Service Company are:

- Growth rates within the company's service territory are above the national average.
- Historically strong operating cash flows.
- Management has historically been able to adequately address the less predictable and challenging regulatory environment that exists within Arizona.

-Demonstrated intent to maintain leverage at a reasonable level.

### **Credit Challenges**

Credit challenges for Arizona Public Service Company are:

- Growing territory requires increasing amounts of capital expenditures.
- Significant increases in fuel and purchased power costs that the company has not been able to recover on a timely basis.
- Significant rate increases are required to recover costs associated with capital investments as well as increased expenses for fuel, purchased power.
- APS operates its business in a challenging state regulatory environment.
- Near term cash flows projected to remain depressed.

### **Rating Rationale**

The Baa1 rating of Arizona Public Service Company's (APS) senior unsecured debt recognizes the economic strength of APS' service territory, a low number of industrial customers, and management's ability to operate within a sometimes challenging regulatory environment. The rating also recognizes the impacts of parent company Pinnacle West Capital Corporation's (Pinnacle) infusion of \$250 million of equity proceeds, as well as \$210 million from the proceeds from its sale of the Silverhawk facility, into APS.

The rating also assumes that potential additions to generating resources and improvements in delivery systems will be accomplished in a manner that allows leverage measures to improve over the near to medium term. The rating assumes management will continue its renewed focus on regulated operations.

### **Rating Outlook**

APS's long-term ratings are currently under review for potential downgrade. The rating review follows a recommendation of an Arizona administrative law judge that APS's application for a special rate surcharge be denied. The review is prompted by deterioration in the company's current and projected financial metrics as a result of increased fuel and purchased power costs that the company has not been able to recover on a timely basis.

The review will focus on the outcomes of the various rate requests that APS has filed or is expected to file with the Arizona Corporation Commission (ACC). Due to the substantial increase in market prices of fuel and electricity, APS is experiencing sharp cost increases. The magnitude of rate increases needed to cover these costs is sufficiently large to be likely to trigger regulatory and ratepayer resistance. Moody's now expects 2006 results to be significantly weaker than previously projected. We previously expected that the 2006 ratio of APS's funds from operations (FFO) to adjusted total debt (incorporating Moody's standard analytic adjustments) would be in the upper teens on a percentage basis. We now estimate that 2006 results will produce ratios that are several percentage points lower, and that results will continue to be somewhat weaker beyond 2006 unless there

are sufficient rate increases including recovery of fuel and purchased power deferrals or a substantial decline in market prices for fuel and wholesale power.

Projected cash flows are highly dependent on the outcomes of several pending, or soon to be filed, regulatory actions including rate increases of approx. 2% for a special surcharge, 5% via an annual fuel adjustment mechanism and 14% for an emergency interim increase. APS has also filed for an approx. 20% increase (inclusive of the 14% emergency increase for fuel) to become effective in 2007.

#### **What Could Change the Rating - UP**

In light of the review for possible downgrade, limited near-term prospects exist for the rating to be upgraded. However, the rating could be retained at the current level if there are clear signals that APS will receive timely and full recovery of its increased costs, or if it were to have a substantial reduction in leverage such that we would expect its credit metrics to return to levels commensurate with similarly rated utility companies.

#### **What Could Change the Rating - DOWN**

The long term rating is likely to be downgraded unless there are clear signals that APS will receive timely and full recovery of its increased costs such that we would expect credit metrics to return to levels commensurate with those of similarly rated utility companies. Any downgrade would not likely be for more than one notch unless there are significant operational issues or the regulatory outcome appears to be worse than anticipated.

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## **RATING CATEGORIES**

### **Long-Term Credit Ratings:**

### **Rating Indicator:**

Excellent

AAA

Strong

AA

Satisfactory

A

Weak

BBB

Vulnerable\*

BB

More Vulnerable\*

B

Highly Vulnerable/Bankruptcy\*

CCC and below

\*Rating indicators of BB and below are considered non-investment grade or "junk."

Plus (+) or minus (-) added to a rating indicator shows relative standing or strength within that rating category.

## MOODY'S INVESTOR SERVICES

Date	Rating	Comment
April 27, 2005	Baa1	<p>The Baa1 rating of Arizona Public Service Company's (APS) senior unsecured debt reflects historically strong cash flow, the economic strength of its service territory, a low number of industrial customers, and moderate leverage. The rating also recognizes the less predictable regulatory environment in Arizona, but incorporates an assumption that APS's demonstrated ability to effectively operate against this backdrop will continue. Adverse regulatory rulings, significant increases in capital expenditures that are financed in a manner inconsistent with the company's historically strong leverage ratios, or sustained inability to meet customer demand for power from available resources could change the Rating -- DOWN.</p>
January 11, 2006	Baa1	<p>APS's long-term ratings are currently under review for potential downgrade. The rating review follows a recommendation of an Arizona administrative law judge that APS's application for a special rate surcharge be denied. The review is prompted by deterioration in the company's current and projected financial metrics as a result of increased fuel and purchased power costs that the company has not been able to recover on a timely basis.</p> <p>...</p> <p>In light of the review for possible downgrade, limited near-term prospects exist for the rating to be upgraded. However, the rating could be retained at the current level if there are clear signals that APS will receive timely and full recovery of its increased costs.</p> <p>...</p> <p>The long term rating is likely to be downgraded unless there are clear signals that APS will receive timely and full recovery of its increased costs such that we would expect credit metrics to return to levels commensurate with those of similarly rated utility companies.</p>

## FITCH RATINGS

Date	Rating	Comment
March 30, 2005	BBB+	Fitch Affirms PNW & APS' Unsecured Ratings at "BBB" & "BBB+"; Outlook Stable.
January 6, 2006	BBB+	<p>Fitch Places PNW and APS on Rating Watch Negative</p> <p>...</p> <p>The Rating Watch Negative for APS and PNW reflects the likelihood of lower ratings for both issuers if the Arizona Corporation Commission (ACC) adopts the administrative law judge's (ALJ) proposed decision in APS' pending power supply adjustor (PSA) surcharge proceeding.</p>
January 26, 2006	BBB+	<p>APS Remains on Watch Negative After Surcharge Proceeding</p> <p>...</p> <p>Without any further rate relief, APS has projected in recent SEC filings that deferral balances would approximate \$290 million by the end of 2006.</p>
January 30, 2006	BBB	<p>FITCH Lowers PNW &amp; APS' Sr. Unsecured Ratings to "BBB-" &amp; "BBB," Respectively</p> <p>...</p> <p>The ACC decision in the PSA proceedings, issued on Jan. 25, 2006, has positive and negative implications for PNW and APS' creditworthiness</p> <p>...</p> <p>The ACC bench order rejecting APS's \$80 million surcharge request on procedural ground and restriction of PSA adjustments to an annual reset is less favorable than Fitch had anticipated</p> <p>...</p> <p>The only option to recover fuel and purchase power costs above amounts determined annually in the PSA would be an emergency rate filing</p>

## STANDARD & POOR'S

Date	Rating	Comment
May 24, 2005	BBB	<p>APS' near term challenges are largely regulatory.</p> <p style="text-align: center;">...</p> <p>Downward pressure on the ratings will occur if APS incurs significant power or fuel cost deferrals in excess of the fuel and purchased power adjuster's limitations. Any positive rating action is unlikely in the near-term given the financial metrics and the longer term risks that the terms of the PSA present.</p>
January 6, 2006	BBB-	<p>Standard &amp; Poor's Ratings Services last month lowered the corporate credit rating of APS and PWCC by one notch, to "BBB-," based on concern that the regulatory process in Arizona is not providing the company timely recovery of fuel and purchased power costs.</p> <p style="text-align: center;">...</p> <p>The company has the option to file an emergency application for rate relief, and if it does so, Standard &amp; Poor's will consider not only the surcharge application, but also the ACC's response to the emergency filing.</p>
January 24, 2006	BBB-	<p>On Dec. 21, 2005, Standard &amp; Poor's Ratings Services lowered the corporate credit ratings on Arizona Public Service Co. (APS) and its parent, Pinnacle West Capital Corp. (PWCC) by one notch to "BBB-."</p> <p style="text-align: center;">...</p> <p>Standard &amp; Poor's stated at the time that any adverse regulatory developments or continued delays in resolving the pending surcharge request could trigger another rating action, which could include a revision of the stale rating outlook to negative, placing the company's debt rating on CreditWatch with negative implications, or lowering the rating to non-investment grade.</p>
January 26, 2006	BBB-	<p>The stable outlook is premised on the ACC providing sustained regulatory support that adequately addresses building deferrals. Negative rating actions could result if regulatory support does not continue, or if market forces or operational issues lead to significant increase in the expected 2006 deferral level.</p>



## LEHMAN BROTHERS

Date	Rating	Comment
January 25, 2006		APS's credit metrics remain in junk territory, barring passage of the interim rate filing.

# RESEARCH

## Credit FAQ: Credit Issues Expected To Continue For Pinnacle West Capital Corp. And Arizona Public Service Co.

**Publication date:**

24-Jan-2006

**Primary Credit Analyst:**

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On Dec. 21, 2005, Standard & Poor's Ratings Services lowered the corporate credit ratings on Arizona Public Service Co. (APS) and its parent, Pinnacle West Capital Corp. (PWCC) by one notch to 'BBB-'. This action reflected three factors: growing fuel and purchased power deferrals, which are weakening financial performance in 2005 and 2006, the lack of action by the Arizona Corporation Commission (ACC) in 2005 to address a portion of these deferrals through a special surcharge, and the likelihood of delays in the completion of APS' recent general rate case (GRC) filing, which suggest that financial weakening may extend into 2007.

Standard & Poor's stated at the time that any adverse regulatory developments or continued delays in resolving the pending surcharge request could trigger another rating action, which could include a revision of the stable rating outlook to negative, placing the company's debt rating on CreditWatch with negative implications, or lowering the rating to non-investment grade.

### Frequently Asked Questions

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#### How large are APS' deferrals of fuel and purchased power?

At Jan. 31, 2006, APS' estimated fuel and purchased power deferrals are expected to be about \$165 million. These deferrals are accumulating because APS' base electric rates are set to reflect 2003 costs, and power and natural gas costs have far exceeded these rates. APS collects 2.0473 cents per kilowatt-hour (kWh) in rates for these costs, but for the 12 months ended September 2005, its actual cost averaged 2.701 cents per kWh. Because these rates will not be updated until the completion of APS' recently filed GRC or the emergency interim request, deferrals will likely continue to accumulate in 2006 and into 2007.

The amount by which 2006 actual fuel and purchased power costs will exceed the authorized expenditures will be a function of retail sales growth, commodity costs, the operational performance of APS' generation assets, and the fuel-in-base factor. Standard & Poor's has estimated that, at year-end 2006, the utility will likely incur an additional \$250 million in fuel and purchased power costs that are not recoverable in base electric rates. The sum of balances to date of \$165 million plus the expected incremental deferrals of \$250 million total \$415 million; however, because APS has the potential to collect some of its 2005 balances through a power supply adjuster (PSA) beginning April 1, year-end 2006 deferrals on the utility's balance sheet will not reach that level.

#### What are the ways that APS could recover its expected deferrals?

Under the terms of a settlement reached in APS' 2003 rate case approved by the ACC in April 2005, the PSA may be increased as much as four mills per kWh (a cap over the life of the PSA) on April 1, 2006. Using 2005 retail sales, and

assuming a 4.5% growth rate (which is consistent with recent results), the four mills should yield about \$125 million in rate relief on an annualized basis, or about \$83 million for the eight months of 2006. Thus, as a rough approximation, APS' deferred balance would be about \$330 million at year-end 2006.

On Jan. 17, the chairman of the ACC introduced a proposal to accelerate the PSA adjustment to Feb. 1. If this were approved by the ACC, an additional two months of the PSA would provide about \$20 million in incremental revenues (e.g., roughly \$125 million multiplied by two-twelfths of the year) in 2006. Thus, if the Hatch-Miller amendment moves forward, year-end 2006 deferred balances will be closer to about \$310 million. The amendment is expected to be discussed on Jan. 24.

Additional relief could be provided if the ACC grants APS' request to recover \$80 million by means of a two-year special surcharge that would increase retail rates by about 2%. On Jan. 4, an administrative law judge issued a decision indicating that APS' surcharge application is premature until the company's first power supply adjustment occurs in April. An ACC vote is scheduled for Jan. 24. Standard & Poor's current assumption is that the surcharge will be approved by the ACC, but will be delayed until July 1, 2006. A surcharge implemented at this time would provide roughly an additional \$20 million to the company in 2006. If it were implemented sooner, the impact on deferrals would be relatively small, providing about \$3 million in each month it is in place during 2006. If the Hatch-Miller amendment were approved and a surcharge was implemented and approved for Feb. 1, the two measures collectively would bring between \$50 million-\$57 million in relief. Accordingly, relative to the year-end expected balances, an accelerated surcharge and PSA, if granted, will reduce deferrals but only by about 20% in the best-case scenario.

#### What is the status with APS' emergency interim filing?

On Jan. 6, 2006, APS filed a \$299 million request for emergency fuel and purchased power-related rate relief. Any amounts, if granted, would be subject to future prudency review. As part of a procedural conference on Jan. 12, four of the five commissioners questioned the definition of an emergency and whether relief is justified. Based on the strong views expressed, it appears unlikely that the filing has support. On Jan. 19, a procedural schedule was set that should allow for a decision in April 2006. Standard & Poor's forecast estimates do not assume emergency relief is granted.

#### Are there credit concerns related to APS' rate cap?

Balancing these potential sources of rate relief are additional adverse financial effects that could occur for APS if its "hard cap" of \$776 million is not lifted. The cap is part of APS' 2004 settlement, approved by the ACC in April 2005, which restricts the total amount of annual fuel and purchased power costs that can be collected in retail rates. APS expects that its fuel and purchased power costs will exceed the cap in the fourth quarter of 2006, and has indicated publicly that its estimated fuel costs will exceed \$800 million. As part of its emergency interim filing, APS has requested that the cap be removed. If the cap is not lifted, any amounts above \$776 million would be unrecoverable, putting further pressure on cash flows.

#### What assumptions does Standard & Poor's make about the performance of APS' generation assets in estimating deferred balances?

Standard & Poor's estimates assume normal operational performance of APS' generation fleet. Forced outages could increase deferred balances. Palo Verde unit 1 is in the process of exiting an outage that occurred last week due to pipe vibrations within the emergency cooling system. APS took the unit offline last week to install clamps in an effort to stop the excess vibrations. From late December until Jan. 17, unit 1 has operated at about 30% capacity while crews have tried to fix the problem, which followed the completion of the unit's exit from a refueling and maintenance outage begun in the fall of 2005. The plant is expected to maintain approximately this level of reduced capacity while additional repairs are considered. Replacement power costs have been incurred in association with this last outage, and could build, depending on the timeline for a solution to be implemented. These and any future costs are not part of Standard & Poor's deferred estimates.

#### How are these estimated deferrals expected to affect 2005 and 2006 financial performance, especially in the context of the credit benchmarks at the 'BBB-' rating?

Year-end results for 2005 are not yet available, but Standard & Poor's expects that 2005 and 2006 results will be on par with the 12 months ending Sept. 30, 2005, when consolidated adjusted funds from operations (FFO) to total debt was 14.8%. FFO to total debt is an important metric for Standard & Poor's, and at a business profile of '6' (on a 10-point scale where '1' is excellent and '10' vulnerable), it reflects a below-investment-grade performance. For the 12 months ending Sept. 30, 2005, FFO interest coverage was 3.3x, which is reasonable for the current rating. Adjusted total debt to total

capitalization was 53.1%, and is solid for the current rating.

Performance in 2007 will be heavily dependent on when the GRC is resolved. APS filed on Nov. 4, 2005, for a \$409.1 million (or 19.9%) rate increase, the majority of which is related to fuel and purchased power costs. Typically, the ACC certifies the application as complete within 30 days, and the case commences. But in early December 2005, the ACC requested that the company re-file its application using a test year ending Sept. 30, 2005, rather than the Dec. 31, 2004 data that APS used. The updated application is expected to be re-submitted to the ACC on Jan. 31, 2005.

As a result, the case will not begin until early March 2006, suggesting that an outcome will be delayed roughly three months from the original schedule, which envisions a ruling by early 2007. Recent public statements by the ACC indicate that spring 2007 may be the earliest a decision could be expected. But there is little precedent in Arizona that would suggest a year-long rate case is likely. A more conservative estimate would assume mid-2007. This could be a credit concern because if permanent rate relief is not in place prior to the peak summer season, financial recovery could also be stalled in 2007.

#### How is the company's liquidity?

Unaudited consolidated cash and investments stood at roughly \$150 million as of Dec. 31, 2005. PWCC and APS also maintain a total of \$700 million in revolving credit facilities, which had approximately \$15 million of usage at year-end 2005 for miscellaneous letters of credit. Standard & Poor's preliminary assessment is that the company's credit lines should be sufficient to support working capital needs, purchases of gas and power, as well as fund margining and collateral requirements for trading operations. As of Dec. 31, 2005, PWCC and APS comfortably met their loan covenant requirements.

PWCC has a \$300 million dollar maturity on April 1, which it plans to refinance. Adverse regulatory actions could affect the costs of borrowing or even access to the capital markets, although this is not currently seen as a significant threat.

APS' reliance on purchases and gas-fired peaking capacity during the winter is low; however, this is seasonal. Fuel and purchased power expenses are anticipated to be accrued faster in July 2006 through September 2006. Standard & Poor's is conducting a more detailed liquidity assessment, which will be completed once more clarity is provided on how the ACC is expected to address interim rate relief requests. APS has a significant hedging program and 85% of its 2006 power and gas requirements are hedged. APS and PWCC are currently holding counterparties' collateral as a result of their in-the-money hedged positions.

#### Could cost saving measures, or the sale of nonregulated assets by PWCC assist in restoring credit quality?

The ACC has requested that the company explain what cost reductions it is making to compensate for the fact that its retail rates are not aligned with production costs. In response, the company cancelled bonuses for its corporate officers, and is certain to investigate additional cost-savings measures. While these actions may address other public policy issues of concern to the ACC, from a credit standpoint cost cutting measures are unlikely to materially alleviate APS' sagging financial performance.

The deferred balances stem from fuel and purchased power costs that the utility incurred to serve retail loads. APS earns no margin on these expenses; they are simply passed straight through to customers. Similar to the circumstances that other western utilities have faced in recent years, APS' fuel and purchased costs substantially exceed the amount currently recoverable in rates. The company may be able to temporarily subsidize the cost of serving retail loads by reducing expenses in other parts of the company, selling other PWCC assets, or issuing debt, but such a strategy is not sustainable, and could very well result in longer-term adverse consequences for the company.

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**RECENT ANALYST QUOTES RELATED TO PNW/APS CREDIT QUALITY  
AND ARIZONA REGULATORY ENVIRONMENT**

**CREDIT QUALITY**

**Shelby Tucker, Bank of America, Equity Research, February 3, 2006**

"The credit ratings of the parent and utility have come under pressure of late....The primary driver in all these moves [ratings actions] is the uncertainty around timely recovery of deferred fuel and purchased power costs."

**Greg Gordon, Citigroup, Equity Research, February 2, 2006**

"Key value driver remains whether PNW receives constructive treatment in pending regulatory matters in front of the ACC....if the ACC continues to assume equity holders will finance in perpetuity the legitimate costs incurred to deliver service to Arizona ratepayers the situation could lead to a further credit downgrade, cause bond spreads to widen, trigger collateral calls, and materially impair the company's ability to access the equity capital markets at favorable terms."

**Dan Ford, Lehman Brothers, Equity Research, February 2, 2006**

"In our current view we see a difficult path to approval of the emergency rate filing as the commission is much more likely to just consider the GRC filing in a full review. This will leave PNW in a cash tight position for the remainder of the year and puts them at risk for further credit downgrades to below the investment grade level."

**Dan Ford, Lehman Brothers, Equity Research, January 25, 2006**

"...APS's credit metrics remain in the junk territory, barring [SIC] passage of the interim rate filing....we still view AZ as a tough regulatory environment."

**Andrew Smith, JP Morgan, Equity Research, February 1, 2006**

"Our focus for PNW going forward will be on the regulatory front, particularly in light of potential rating agency action as we believe it may require the company to raise capital to support its investment grade."

"...the company is deferring a portion of its fuel and purchased power costs, which has increased rating agency pressure and could require the company to raise capital to support its credit ratings."

**Terran Miller, UBS Securities, Fixed Income Research, January 26, 2006**

"We still believe additional rate relief in the form of a surcharge will be forthcoming on a timely basis and that the commission will address the company's request for emergency/interim rate relief by the middle of April. ...we continue to believe that the bulk of this commission would like to avoid a downgrade at Standard & Poor's to non-investment grade and therefore, decisions will be measured, but supportive of that goal."

"There were also comments that cause us to question the company's ability to secure emergency rate relief for another \$299 million to cover additional anticipated deferrals during 2006. ...Nonetheless, we do believe that there could be support for recovery of a proportionate share of the emergency/interim rate case."

**Anne Selting, Standard and Poor's, January 26, 2006**

"The ACC's vote to limit the flexibility of the timing of the surcharge elevates the importance of APS' request for \$299 million in interim emergency rate relief..."

"That is, a limited PSA with a backstop surcharge that can be filed according to a specified timeline places incremental pressure on other processes that could support credit quality through 2006, especially when permanent rate relief via a general rate case ruling is not expected to occur within the next year.

Much of these issues stem from the very weak PSA, which is triggered based on a date and not on a threshold level of deferrals and which limits any adjustment to a narrow cap. This structure transfers any deferred balances to a surcharge process. In turn, the surcharge process is open-ended, with no concrete timeline for resolution. At the same time APS has a significant reliance on natural gas. And this dependence is expected to grow in the coming years. Given the volatility of this fuel and expectations that at least in the near-term prices will remain high relative to historic levels – certainly relative to 2003 levels on which current retail rates are based – a critical underpinning of credit quality is the timing of recovery. This emphasis is particularly important in Arizona, where there is little precedent to support the conclusion that general rate cases can be processed quickly.

However, despite the emphasis that Standard & Poor's places on power supply adjustment mechanisms, it is possible that if the ACC establishes a track record of being supportive and timely toward emergency rate relief requests, that this vehicle could compensate for the current limitations of APS' PSA.

The stable outlook is premised on the ACC providing sustained regulatory support that adequately addresses building deferrals. Negative rating actions could result if regulatory support does not continue, or if market forces or operational issues lead to significant increases in the expected 2006 deferral level."

**Faith Klaus, Bank of America, Debt Research, January 26, 2006**

"Fitch believes, as we do, that the result of yesterday's meeting and the surcharge, when it is implemented, will not address the rapidly building deferral balances for fuel and purchased power at APS....If APS is unsuccessful in obtaining additional cash through interim relief, we are very concerned that S&P and the other agencies will take further action."

"We think that S&P's recent downgrade of PNW's and APS's ratings captured some of the uncertainty with the commission; however, S&P is looking for the ACC to continue to provide regulatory support, especially going forward in regards to allowing APS to address its growing fuel cost deferral balance. If the commission does not, then as we noted already we think S&P will take further action."

**Faith Klaus, Bank of America, Debt Research, January 25, 2006**

"...she [Commissioner Mayes] wanted to throw out the emergency rate relief request and focus on the base rate case. She is concerned that having two cases would produce undo stress on the staff and commission resources. Commissioner Spitzer supported her, but wanted to approve an expedited base rate case decision – the best he could do there was 1Q 2007, still too late for S&P, in our view."

"The result of the PSA acceleration and the surcharge request (which we assume will be approved in the near future when the company refiles [SIC]) would be an approximately \$140 million recovery of fuel and purchased power balances. While this would be a positive sign that the ACC is taking steps to address the building purchased power and fuel deferrals, it is a drop in the bucket when you think about how quickly these deferrals are building for APS."

"APS believes that it requires not only the PSA acceleration and the surcharge, but also the \$299 million interim emergency rate relief in order to stave off an additional downgrade by S&P."

"We believe that despite all of the political posturing, the ACC understands that it must do what it can to protect the investment grade rating of APS. The cost of a downgrade to junk would be astronomical for customers because APS has to fund a very large capex [SIC] program to support growth in the state."

**Faith Klaus, Bank of America, Debt Research, January 24, 2006**

"The RUCO representative was very sympathetic to APS's plight and indicated if this commission could provide relief and stave off a downgrade to junk for APS, then it should do it. This is great language coming from a consumer advocate group and it showed a clear understanding, in our view, of what is going on in Arizona."

**Faith Klaus, Bank of America, Debt Research, January 23, 2006**

"Our thought is that the commissioners are suggesting that if they approve the PCA [Power Cost Adjustor] and the surcharge, the emergency rate relief request may not be necessary because the actions would show good faith on the ACC's part to investors and the rating agencies that they will allow APS to recover prudently incurred costs.... We believe that if the commission approved the surcharge and the PCA [Power Cost Adjustor] acceleration, it may be enough to stave off additional downgrades by S&P and allow the ACC time to opine on the base rate case and the base rate fuel portion of the case that is before them in an emergency motion."

**Regulatory Research Associates, Utility Focus, January 27, 2006**

"A major concern is the fact that mounting cash flow deferrals led Standard and Poor's (S&P) to downgrade PNW/APS corporate credit ratings on December 21, 2005, to one step above junk status, and a further downgrade would significantly increase the company's borrowing costs going forward."

"The regulatory process at the ACC continues to be tedious and laborious.... This regulatory lag is a source of deteriorating cash flow, and resulted in a December 2005 credit quality downgrade by S&P that leaves PNW/APS one step above junk status. At the ACC meeting, the company indicated that denial of the emergency request would likely lead to a further downgrade. Given the tone of this week's discussions at the ACC with regard to the implementation of the PSA, our expectations for the Commission to authorize a significant emergency rate hike in the near-term are not high. ...There are still many hurdles for APS to cross, and at the present time we consider the regulatory environment in Arizona to be highly politicized and volatile."

## **ARIZONA REGULATORY ENVIRONMENT**

**Steve Fleishman, Merrill Lynch, Equity Research, February 7, 2006**

"...attention remains focused on ongoing attempts to seek regulatory recovery of fast-growing deferred fuel and purchased power balances. These are being addressed in the context of a PSA adjustor mechanism approved as part of the latest base rate settlement. This had looked like a straightforward adjustment mechanism, but has not proved to be so in practice, with APS now embroiled in multiple fuel-related applications before the Arizona Corporation Commission (ACC). While the commission has recently taken steps designed to accelerate recovery of 2005 deferrals, actions to date have been relatively modest in the context of the overall issues."

"Clearly there is a great deal of uncertainty on the regulatory front, however, the most pressing issue being addressing [SIC] rising fuel and power cost deferrals. While the ACC's recent actions have gone some way towards demonstrating a commitment to dealing with this issue on a timely basis, there are several major outstanding uncertainties, including the pending rate surcharge application; the emergency fuel filing and the delayed general rate case."



"With fuel and power costs having continued to rise, recovery of APS's growing deferred balances has become the central regulatory issue."

"...APS's emergency interim rate request remains pending with the ACC. ...This will be a key proceeding to watch as it will address the issue of current and future costs..."

**Steve Fleishman, Merrill Lynch, Equity Research, October 28, 2005**

"...these [retail] growth rates present extra regulatory challenges, particularly in the face of unprecedented fuel and power cost pressures."

"While APS should ultimately recover these [deferred fuel] costs through the regulatory process, recent AZ experience suggests this may be neither simple nor timely."

"The need to fund significant expansion of generation infrastructure – coupled with unprecedented levels of fuel cost recovery – means rates are continually being subjected to regulatory scrutiny. This would be a challenge in any jurisdiction, but it is made all the more difficult given Arizona's elected utility commission."

**Shelby Tucker, Bank of America, Equity Research, February 3, 2006**

"While all of the company's proceedings before the regulators involve what would reasonably seem to be prudently incurred costs of providing reliable service, we note there is risk in the process, particularly one with so many moving pieces."

**Andrew Smith, JP Morgan Securities, Equity Research, February 2, 2006**

"Despite the relatively small amounts [PV cost recovery], we expect these issues to be heavily debated and contentious given the difficult regulatory environment in Arizona."

**Andrew Smith, JP Morgan, Equity Research, February 1, 2006**

"...we believe there is the possibility that a portion or all of this balance will not be recovered as the regulatory environment in Arizona has proven to be difficult."

"We believe the shares should trade at a discount to the group to reflect the potential negative impact of rising commodity prices and the continued regulatory overhang at the utility as it begins the rate case process this year."

**Michael Worms, Harris Nesbitt, Equity Research, February 2, 2006**

"We believe the discounted valuation is appropriate given regulatory uncertainty and well-below industry average nuclear capacity factors."

"...Arizona remains a challenging regulatory jurisdiction..."

"While strong customer growth remains a driving force, the pressure to serve that growing demand is expected to keep PNW before the regulators for the foreseeable future. As such, we regard regulatory uncertainty as a constant for Pinnacle West, particularly since regulation in Arizona has been less constructive relative to many other states, in our opinion....In our view, Arizona remains a challenging regulatory jurisdiction and we therefore remain cautious on PNW shares...."

"While PNW continues to benefit from operating in one of the fastest-growing regions of the country, the costs associated with serving this growing load continue to escalate. Our 2006 EPS estimate reflects the pressure on earnings related to these costs..."

**Michael Worms, Harris Nesbitt, January 3, 2006**

"In 2005, we found utilities focused on the following....

Generally, reasonable and timely regulatory treatment....Overall, we have found most recent regulatory decisions to be constructive and balanced, supporting the utilities [SIC] reinvestment in their core businesses. However, some regulatory environments remain challenging, in our opinion, such as Arizona and Vermont."

**Dan Ford, Lehman Brothers, Equity Research, February 2, 2006**

"We continue to see a challenging regulatory calendar ahead...."

"...Arizona remains a difficult regulatory jurisdiction...."

**Regulatory Research Associates, Utility Focus, January 27, 2006**

"...10.25% return on equity, which was low by national standards, especially for a high-growth vertically-integrated company."

"...the Arizona regulatory climate has been, and continues to be, highly politicized....This regulatory lag does not bode well for a company that will likely need to file successive rate cases in order to improve its earnings quality (convert deferrals into cash) and recover its increasing operating costs."

"...we note that there was some discussion at the ACC this week concerning the appropriateness of continuing to pay dividends during this period of reduced cash flow caused by rising power costs. While there appears to be support at the ACC that the dividend level should be left out of the Commission's decision-making, we believe that there may be some pressure on PNW to take a more cautious approach in this area going forward."

**Dan Eggers, Credit Suisse, Equity Research, January 26, 2006**

"We will continue to... expect the future actions of the ACC in this election year to reflect a heightened level of political and regulatory pressure."

"While we are pleased to see the company receive some rate relief in the near term, we are concerned that during this 2006 election year the ACC will look to extract financial concessions from the company through other means, such as the company's allowed equity ratio or its authorized returns on capital."

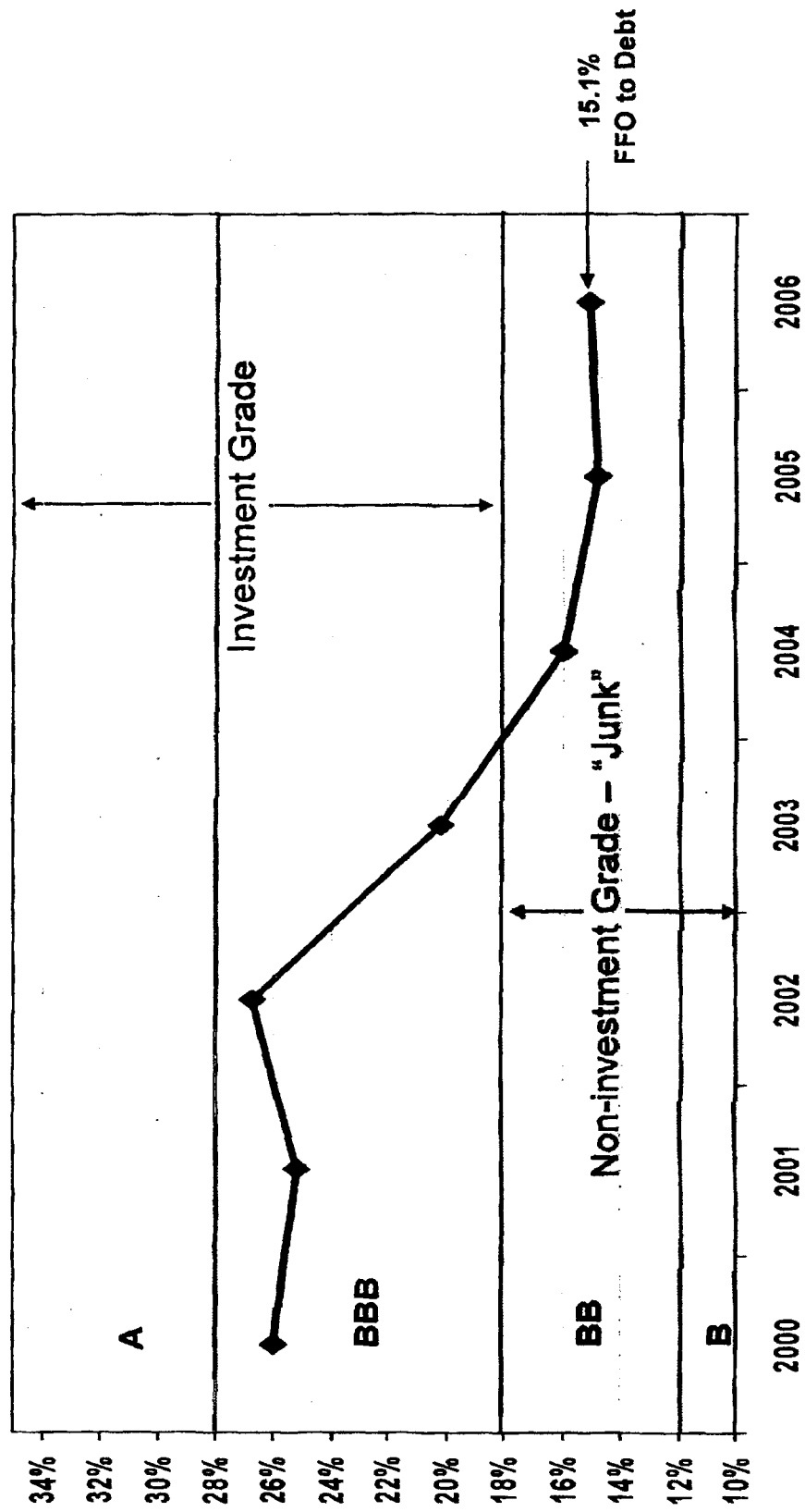
**Brooke Glenn Mullin, JP Morgan Securities, Equity Research, January 24, 2006**

"Additionally, the Commission agreed to lift the fuel and purchased power cap that was included in the settlement. While this removes the risk of not recovering these costs, it does not change the cash impact as these costs would be deferred for future recovery."

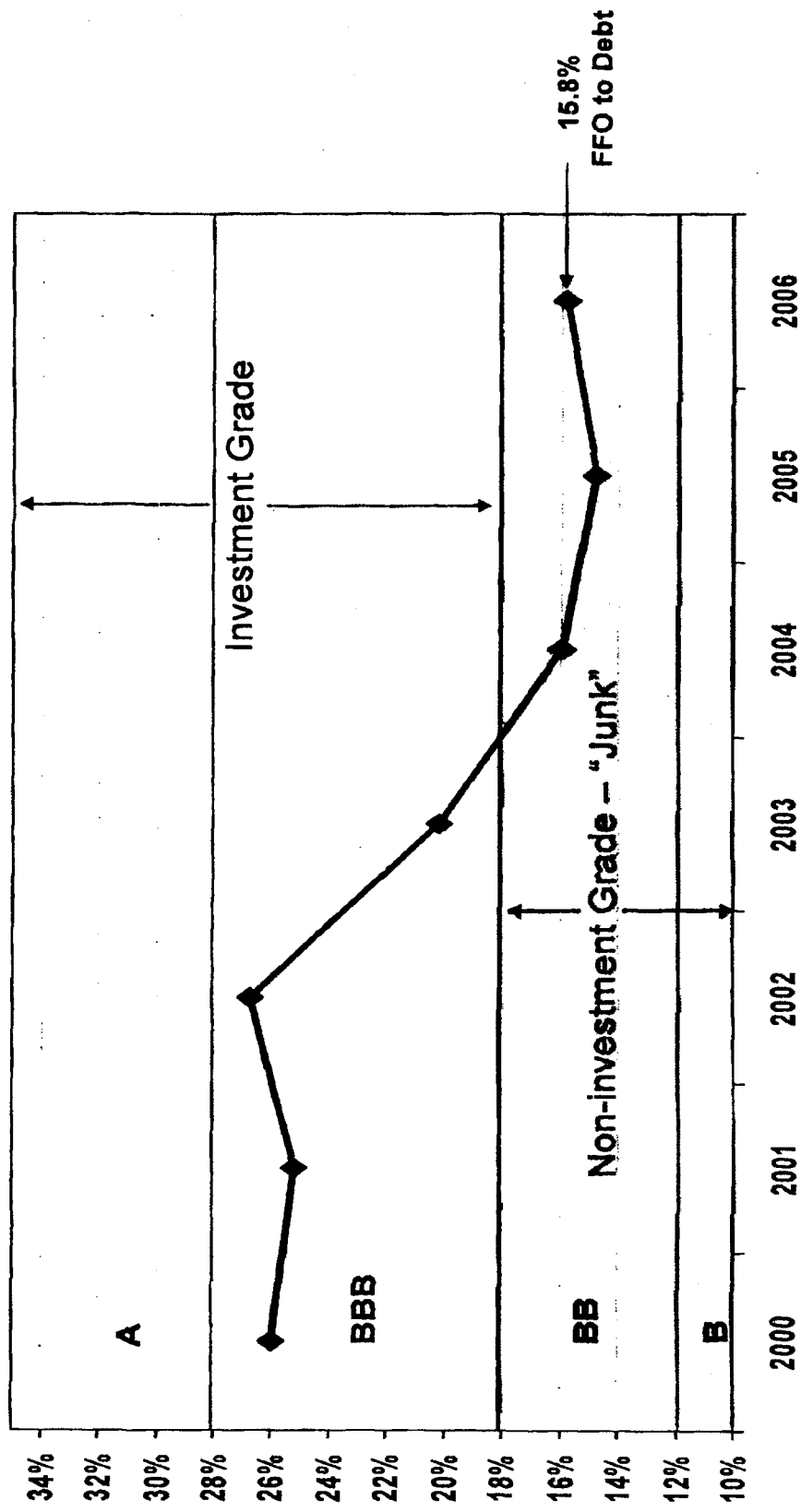
**Brooke Glenn Mullin, JP Morgan, Equity Research, September 1, 2005**

"Our focus going forward will be on the regulatory front, which is expected to be challenging. Although on the surface the rate case appears fairly straight forward, we continue to believe it will be a challenge for the company. Not only has Arizona been a difficult regulatory environment historically, the magnitude of the increase combined with the April rate increase and rising commodity prices may be too large politically."

**Arizona Public Service Company**  
**Ratio of Funds from Operations (FFO) to Debt**  
**(Current Rates Including 2/06 PSA Adjustor)**

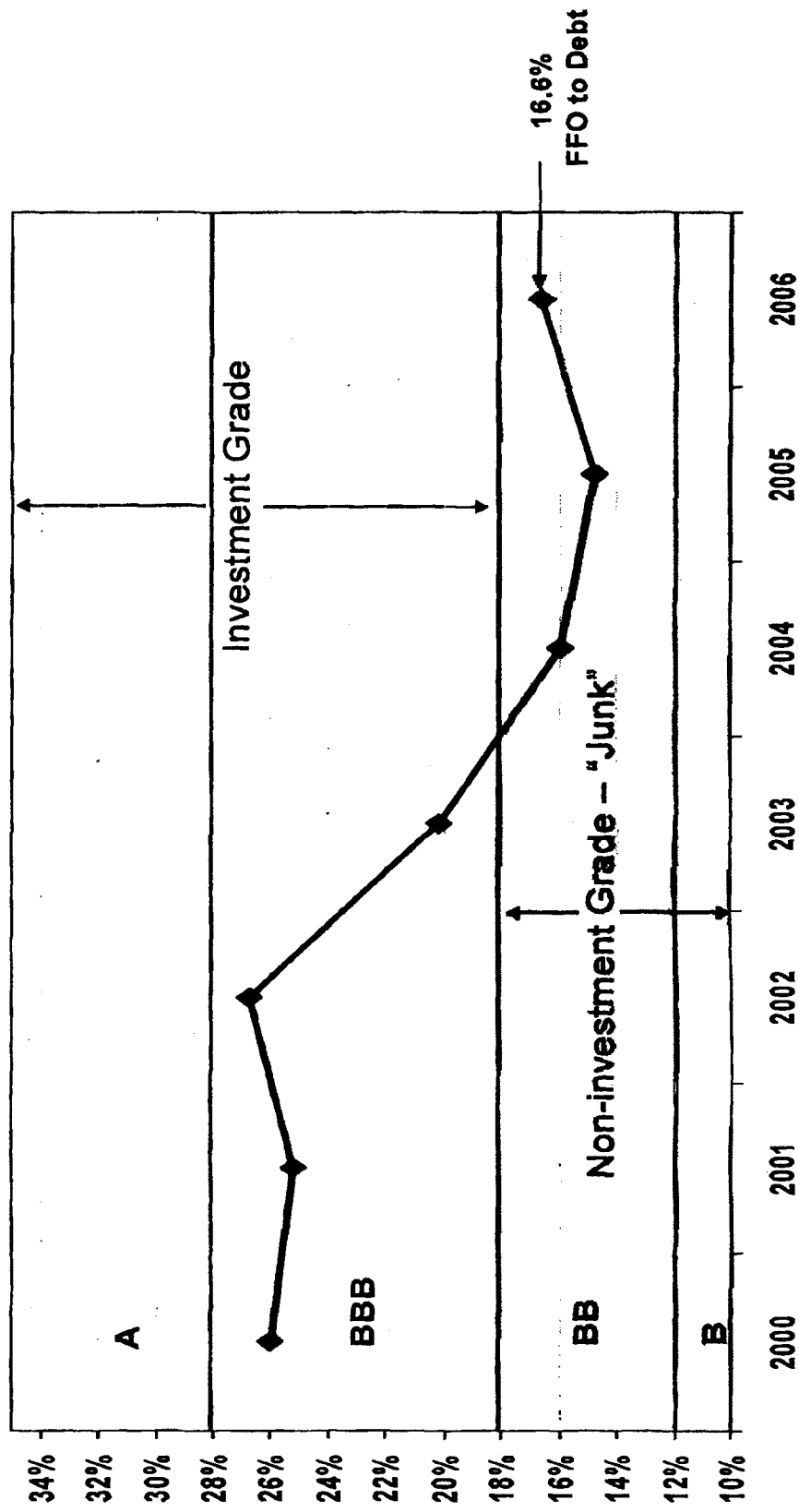


**Arizona Public Service Company**  
**Ratio of Funds from Operations (FFO) to Debt**  
**(Current Rates Including 2/06 PSA Adjustor and APS' May and July Surcharges\*)**



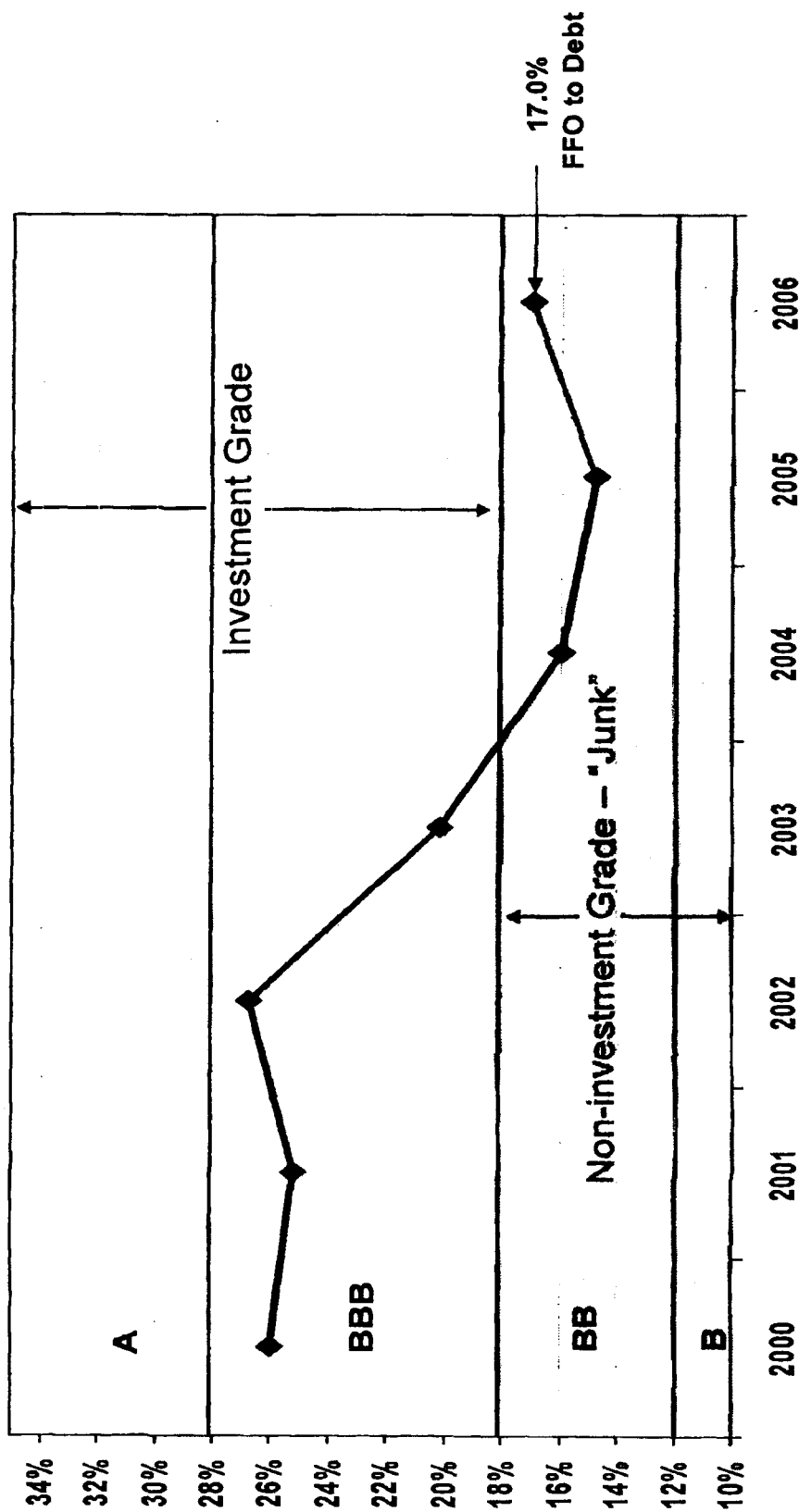
\* Assumes 2/1/06 PSA Adjustor as approved by Decision # 68437, ACC approval of APS' Surcharge application dated 2/2/06, and no rate relief associated with APS' proposed Interim increase.

# Arizona Public Service Company Ratio of Funds from Operations (FFO) to Debt (Staff Proposal\*)



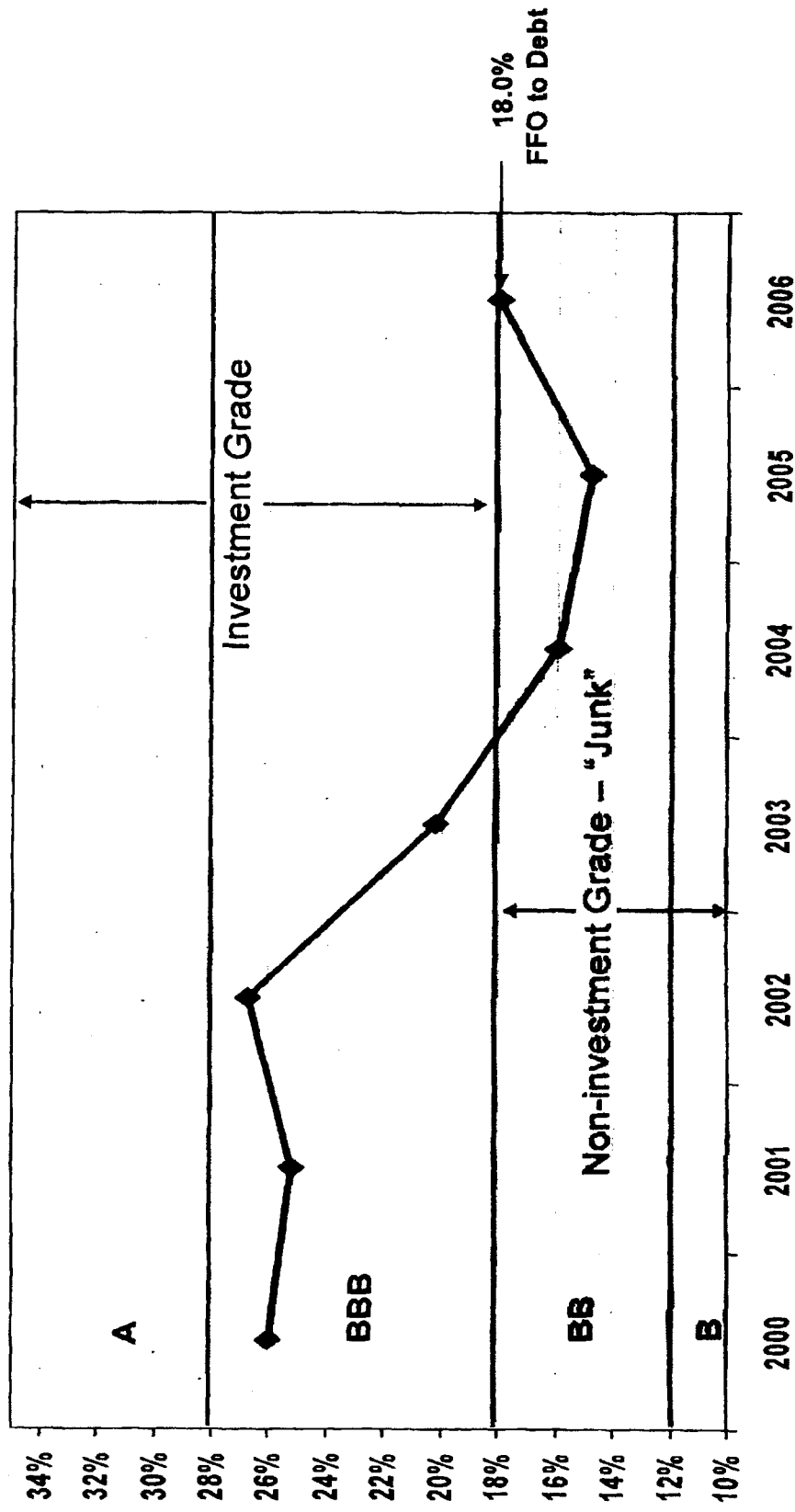
\* Assumes 2/1/06 PSA Adjustor as approved by Decision # 68437, ACC approval of APS' Surcharge application dated 2/2/06, and approval of Staff's PSA proposal with 6/30/06 and 9/30/06 quarterly surcharges effective within 60 days.

**Arizona Public Service Company**  
**Ratio of Funds from Operations (FFO) to Debt**  
**(Staff Proposal (as modified by APS\*))**



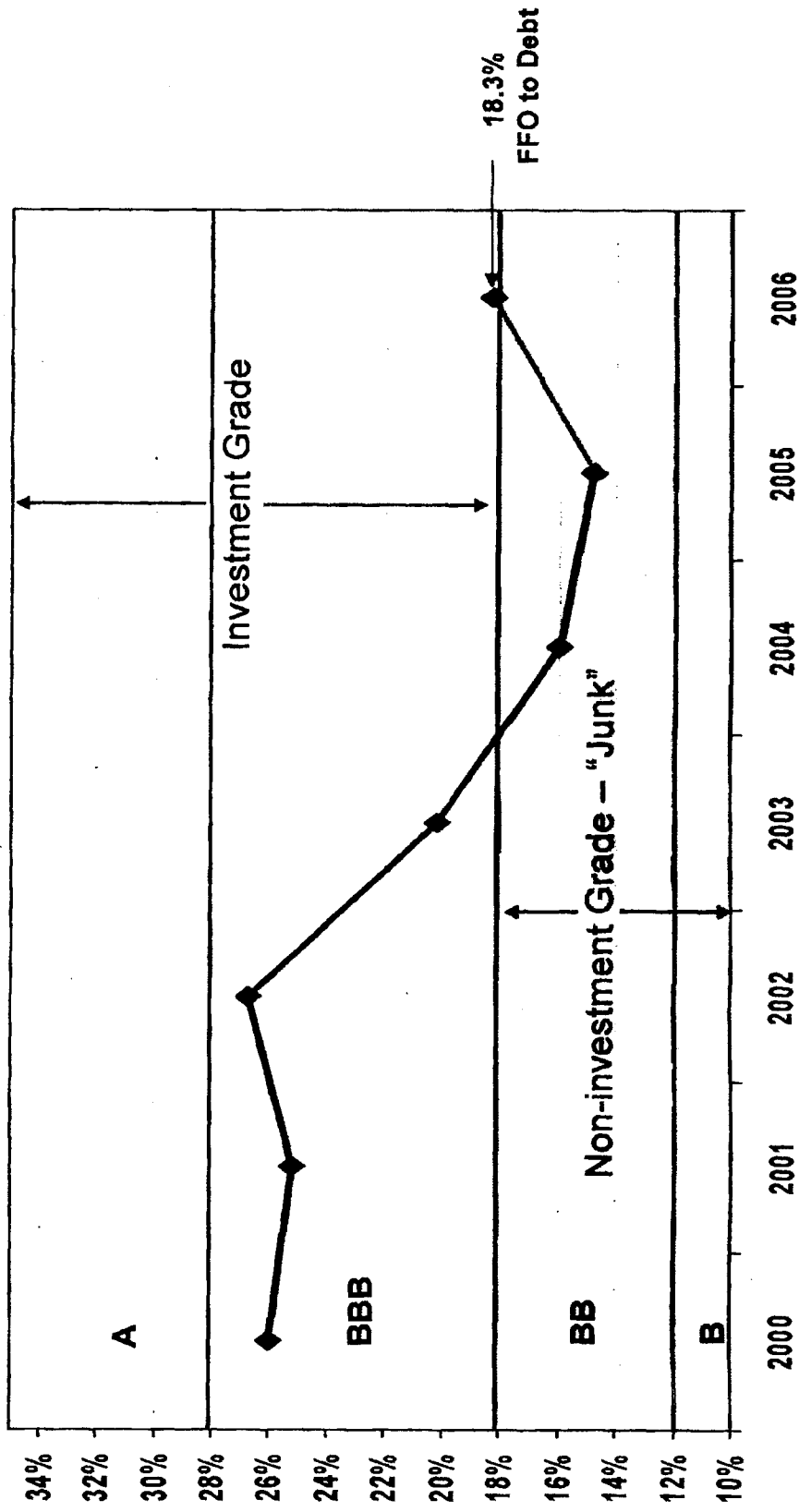
\* Assumes 2/1/06 PSA Adjustor as approved by Decision # 68437, ACC approval of APS' Surcharge application dated 2/2/06, and approval of Staff's PSA proposal (as modified by APS) with 6/30/06 and 9/30/06 quarterly surcharges effective within 30 days.

# Arizona Public Service Company Ratio of Funds from Operations (FFO) to Debt (Higgins' Proposal\*)



\* Assumes 2/1/06 PSA Adjustor as approved by Decision # 68437, approval of only 5/06 surcharge as requested in APS' Surcharge application dated 2/2/06, and Higgins' proposed \$126M surcharge effective 5/1/06 based on an 8 month amortization.

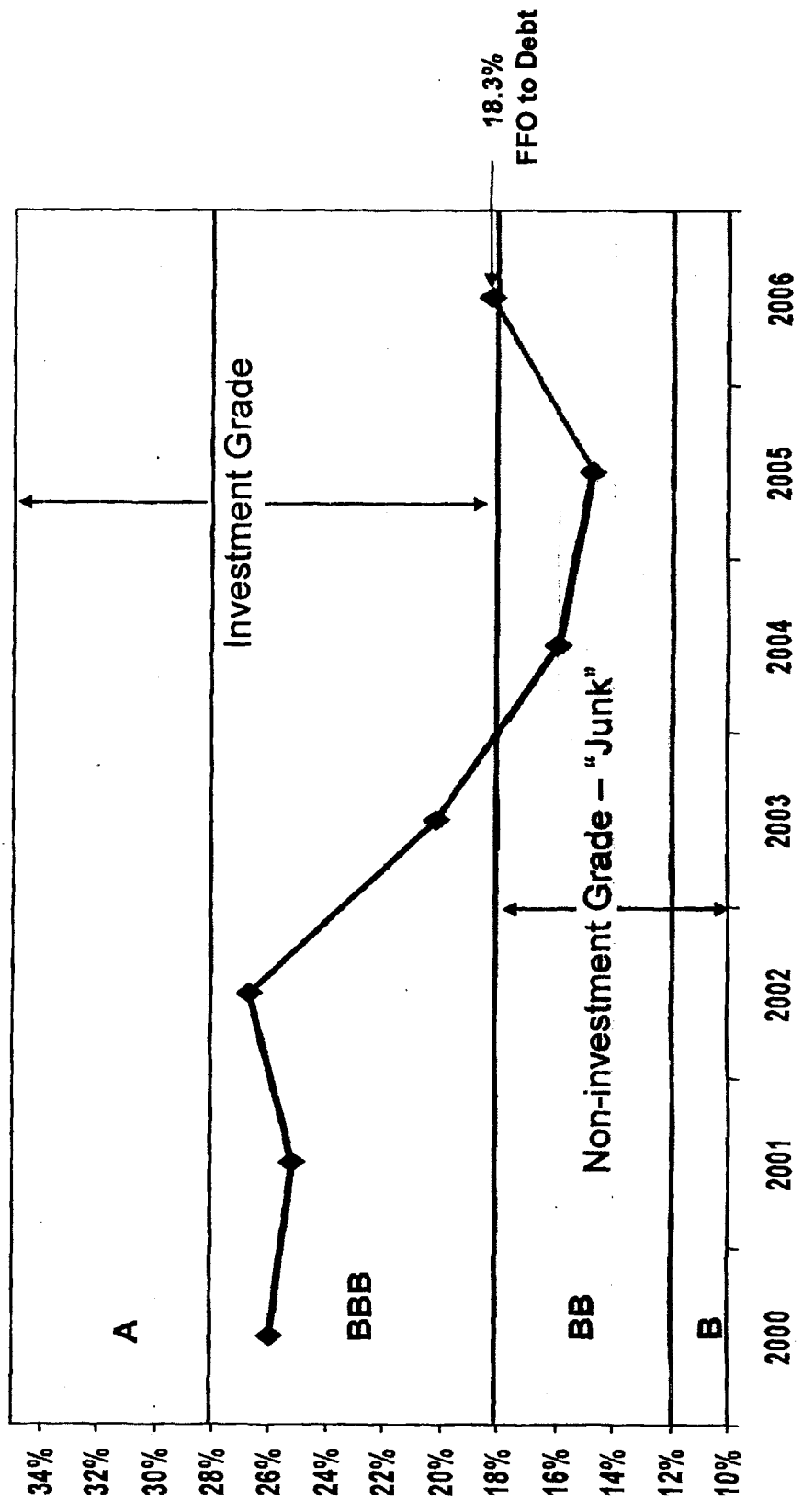
**Arizona Public Service Company**  
**Ratio of Funds from Operations (FFO) to Debt**  
**(Higgins' and Staff Proposals (as modified by APS\*))**



\* Assumes 2/1/06 PSA Adjustor as approved by Decision # 68437, approval of only 5/06 surcharge as requested in APS' Surcharge application dated 2/2/06, approval of Higgins' proposed \$126M surcharge effective 5/1/06 based on an 8 month amortization, and approval of Staff's PSA proposal (as modified by APS) with 6/30/06 and 9/30/06 quarterly surcharges effective within 30 days.

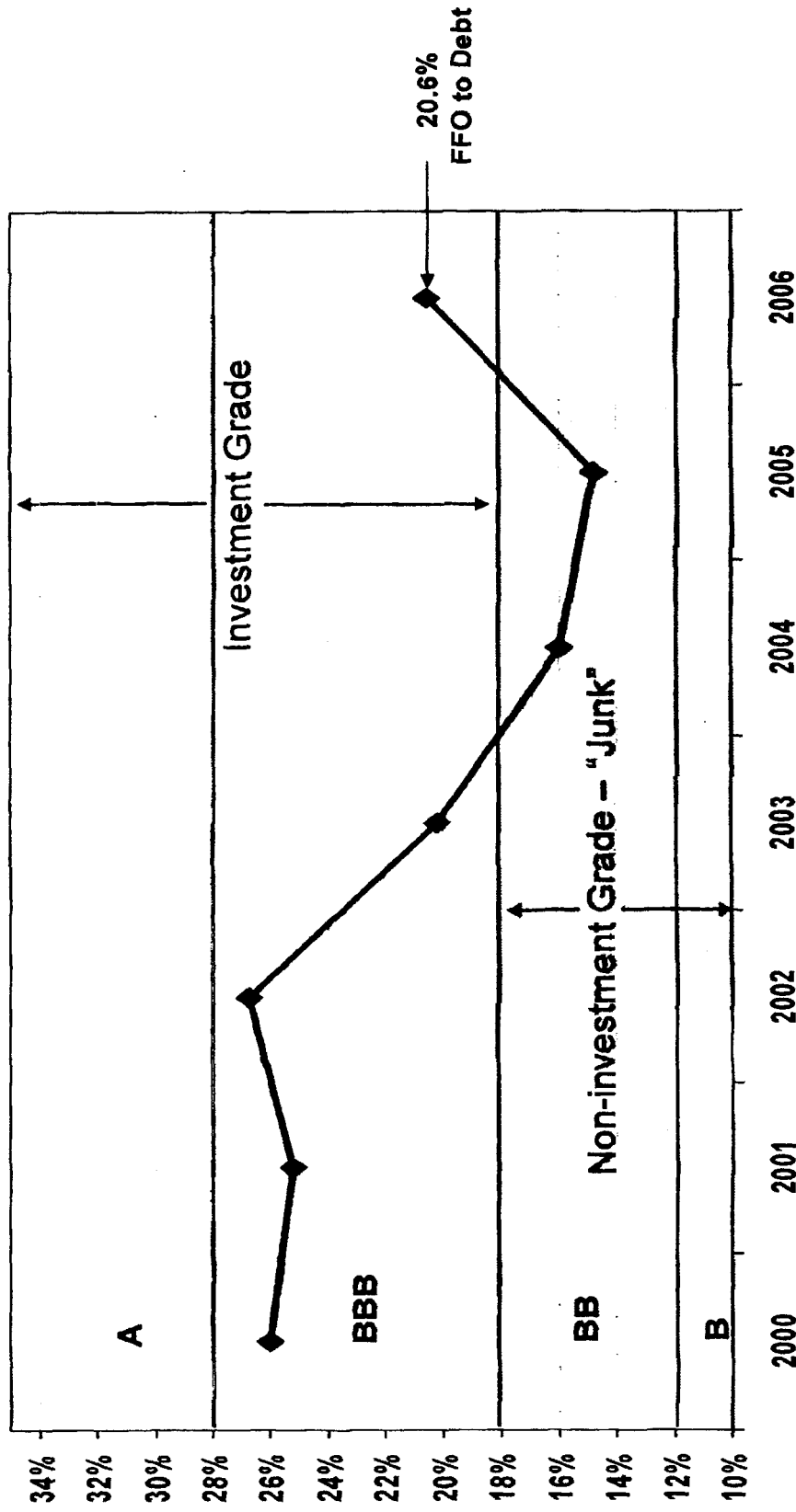


# Arizona Public Service Company Ratio of Funds from Operations (FFO) to Debt (Higgins' and Staff Proposals (as modified by APS\*))



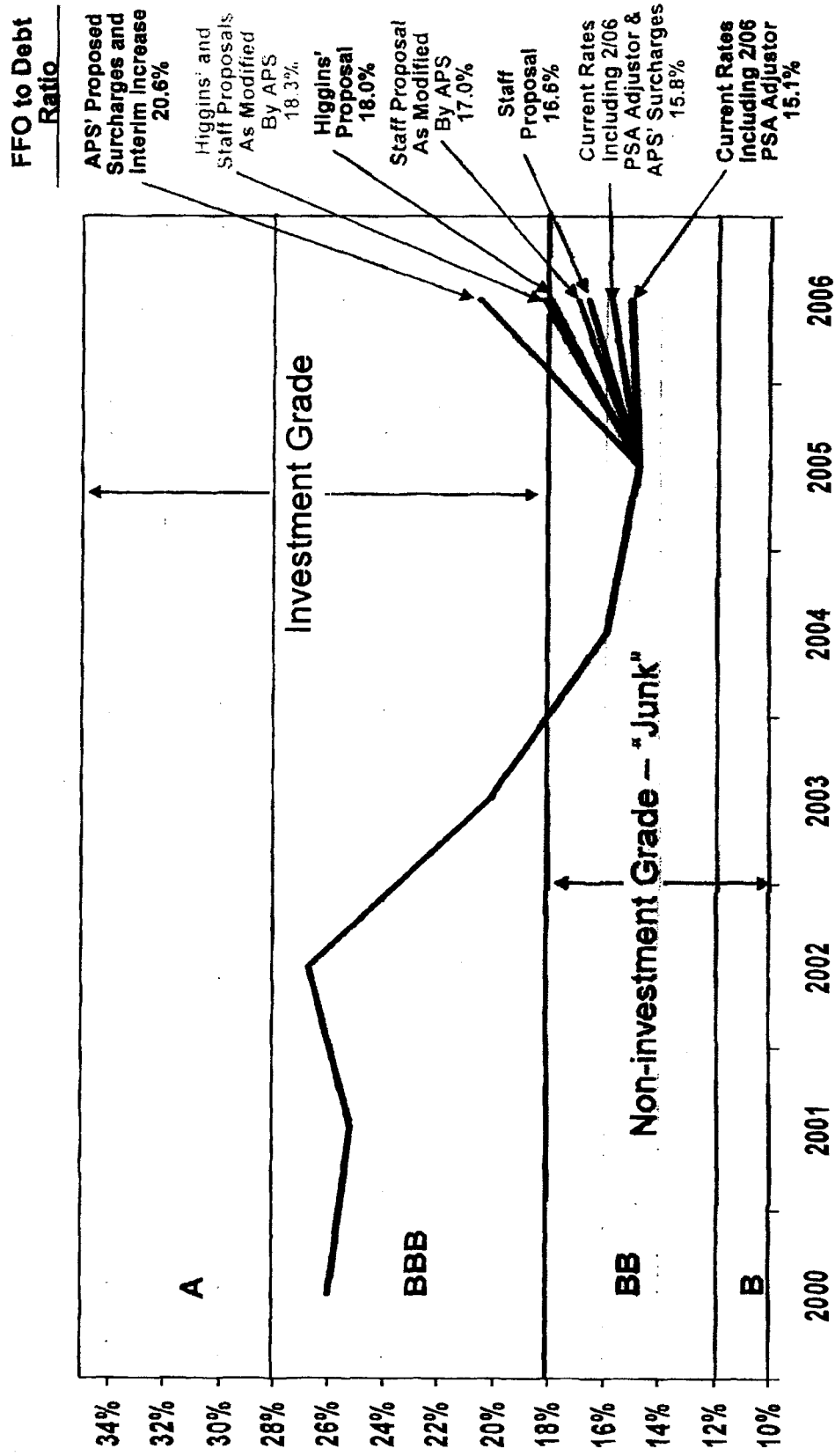
\* Assumes 2/1/06 PSA Adjustor as approved by Decision # 68437, approval of only 5/06 surcharge as requested in APS' Surcharge application dated 2/2/06, approval of Higgins' proposed \$126M surcharge effective 5/1/06 based on an 8 month amortization, and approval of Staff's PSA proposal (as modified by APS) with 6/30/06 and 9/30/06 quarterly surcharges effective within 30 days.

**Arizona Public Service Company**  
**Ratio of Funds from Operations (FFO) to Debt**  
**(APS' Proposed Surcharges and Interim Increases\*)**



\* Assumes 2/1/06 PSA Adjustor as approved by Decision # 68437, ACC approval of APS' Surcharge application dated 2/2/06, and approval of APS' proposed Interim increase effective 5/1/06.

# Arizona Public Service Company Ratio of Funds from Operations (FFO) to Debt\*



\* Key financial ratio used by the credit rating agencies (Standard & Poor's and Moody's) to measure cash flow available to service debt

**ARIZONA PUBLIC SERVICE COMPANY**  
**Additional Interest Costs at Non-Investment Grade**  
**(\$000)**

YEAR	SECURITY	CREDIT	FACE VALUE	CURRENT RATE/FEE	BIG RATE/FEE	COST DIFFERENTIAL	ADDITIONAL ANNUAL INTEREST	CUMULATIVE ADDITIONAL INTEREST
<u>Short-Term Debt:</u>								
2006	CP		200,000	0.510%	1.050%	1,080		
<u>Auction Rate Tax-Exempt Insured:</u>								
2006	Coc 2004A		12,850	0.325%	0.800%	61		
2008	Nav 2004A-E		166,150	0.325%	0.800%	789		
2008	Mar 2005A-E		163,975	0.265%	0.665%	656		
	<b>Auction Rate Tax-Exempt Insured Subtotal</b>		<b>342,975</b>			<b>1,506</b>		
<u>Tax-Exempt w/ L/C:</u>								
2006	Farm 1994A-C		146,650	0.500%	1.500%	1,467		
2006	Coc 1994A & 1998		49,520	0.600%	1.700%	545		
	<b>Tax-Exempt w/ L/C Subtotal</b>		<b>196,170</b>			<b>2,011</b>		
<u>New Taxable Debt</u>								
2006	Sr. Note		250,000	0.000%	2.265%	5,663	10,260	10,260
2007	Sr. Note		550,000	0.000%	2.265%	12,458	22,717	32,977
2008	Sr. Note		500,000	0.000%	2.265%	11,325	34,042	67,020
2009	Sr. Note		625,000	0.000%	2.265%	14,156	48,199	115,218
<u>New(N)/Refinanced(R) L.T. Debt:</u>								
2010	Sr. Note (N)		250,000	0.000%	2.265%	5,663	53,861	109,079
2011	6.375% Sr. Note (R)		400,000	0.000%	2.265%	9,060	0	0
2011	Sr. Note (N)		250,000	0.000%	2.265%	5,663	68,584	237,663
2012	6.5% Sr. Note (R)		375,000	0.000%	2.265%	8,494	0	0
2012	Sr. Note (N)		250,000	0.000%	2.265%	5,663	82,740	320,403
2013	Mar 2002A (R)		90,000	0.450%	0.600%	135	0	0
2013	Sr. Note (N)		250,000	0.000%	2.265%	5,663	98,537	408,940
2014	5.8% Sr. Note (R)		300,000	0.000%	2.265%	6,795	0	0
2014	Sr. Note (N)		250,000	0.000%	2.265%	5,663	100,986	508,936
2015	4.65% Sr. Note (R)		300,000	0.000%	2.265%	6,795	0	0
2015	Sr. Note (N)		250,000	0.000%	2.265%	5,663	113,452	623,387

**ARIZONA PUBLIC SERVICE COMPANY**  
**Additional Interest Costs at Non-Investment Grade**  
**(\$000)**

YEAR	SECURITY	CREDIT	FACE VALUE	CURRENT RATE/FEE	BIG RATE/FEE	COST DIFFERENTIAL	ADDITIONAL ANNUAL INTEREST	CUMULATIVE ADDITIONAL INTEREST
2006	<u>Short-Term Debt:</u>							
	CP		200,000	0.510%	1.050%	1,080		
2006	<u>Auction Rate Tax-Exempt Insured:</u>							
	Coc 2004A		12,850	0.325%	0.800%	61		
2006	Nav 2004A-E		166,150	0.325%	0.800%	789		
2006	Mar 2005A-E		163,975	0.265%	0.665%	656		
	<u>Auction Rate Tax-Exempt Insured Subtotal</u>		<u>342,975</u>			<u>1,506</u>		
2006	<u>Tax-Exempt w/ L/C:</u>							
	Farm 1994A-C		146,650	0.500%	1.500%	1,467		
2006	Coc 1994A & 1998		49,520	0.600%	1.700%	545		
	<u>Tax-Exempt w/ L/C Subtotal</u>		<u>196,170</u>			<u>2,011</u>		
2006	<u>New Taxable Debt</u>		250,000	0.000%	4.680%	11,700	16,297	16,297
2007	Sr. Note		550,000	0.000%	4.680%	25,740	42,037	58,335
2008	Sr. Note		500,000	0.000%	4.680%	23,400	65,437	123,772
2009	Sr. Note		625,000	0.000%	4.680%	29,250	94,687	218,459
2010	<u>New(N)/Refinanced(R) LT Debt:</u>							
	Sr. Note (N)		250,000	0.000%	4.680%	11,700	106,387	324,847
2011	6.375% Sr. Note (R)		400,000	0.000%	4.680%	18,720	0	0
2011	Sr. Note (N)		250,000	0.000%	4.680%	11,700	136,807	461,654
2012	6.5% Sr. Note (R)		375,000	0.000%	4.680%	17,550	0	0
2012	Sr. Note (N)		250,000	0.000%	4.680%	11,700	166,057	627,712
2013	Mar 2002A (R)		90,000	0.450%	0.600%	135	0	0
2013	Sr. Note (N)		250,000	0.000%	4.680%	11,700	177,892	805,604
2014	5.8% Sr. Note (R)		300,000	0.000%	4.680%	14,040	0	0
2014	Sr. Note (N)		250,000	0.000%	4.680%	11,700	203,632	1,009,236
2015	4.65% Sr. Note (R)		300,000	0.000%	4.680%	14,040	0	0
2015	Sr. Note (N)		250,000	0.000%	4.680%	11,700	229,372	1,238,608

**2006-2009 Capital Expenditures and External Financing Required (\$m)**

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>Total 2006 - 2009</u>
<b><u>Nuclear</u></b>					
Nuclear Fuel	\$ 31	\$ 35	\$ 33	\$ 42	\$ 141
Steam Generator Replacement	17	44	2	-	63
Other Nuclear Plant Improvements	30	29	44	39	142
<b>Subtotal, Nuclear</b>	<b>78</b>	<b>108</b>	<b>79</b>	<b>81</b>	<b>346</b>
<b><u>Fossil Plant Improvements</u></b>					
Four Corners	17	22	70	72	181
Cholla	40	53	76	60	229
Navajo	4	2	4	5	15
<b>Subtotal, Coal Plant (incl. environmental)</b>	<b>61</b>	<b>77</b>	<b>150</b>	<b>137</b>	<b>425</b>
Redhawk	20	6	5	50	81
West Phoenix	15	9	21	15	60
Ocotillo	-	-	10	3	13
Saguaro	2	2	8	1	13
Other Fossil Plant	4	3	4	2	13
<b>Subtotal, Gas/Oil/Hydro</b>	<b>41</b>	<b>20</b>	<b>48</b>	<b>71</b>	<b>180</b>
<b>Subtotal, Fossil Plant</b>	<b>102</b>	<b>97</b>	<b>198</b>	<b>208</b>	<b>605</b>
<b>Total Production</b>	<b>180</b>	<b>205</b>	<b>277</b>	<b>289</b>	<b>951</b>
<b><u>Transmission</u></b>					
<b>Major Line / Substation Projects</b>					
Raceway - Avery	-	17	6	11	34
Avery - Misty Willow - Pinnacle Peak	6	14	17	13	50
Palo Verde - TS5 (1)	8	7	34	36	85
TS5 - Raceway (1)	-	33	19	10	62
TS5 - TS1 - TS3 230kV (1) (2)	29	10	18	31	88
Palo Verde - Yuma 500kV	-	2	22	10	34
Raceway - Pinnacle Peak	-	-	3	26	29
<b>Subtotal, New Transmission Lines</b>	<b>43</b>	<b>83</b>	<b>119</b>	<b>137</b>	<b>382</b>
Other Additions/Improvements	69	78	74	95	316
Relocations & Emergency	5	5	4	4	18
<b>Total Transmission</b>	<b>117</b>	<b>166</b>	<b>197</b>	<b>236</b>	<b>716</b>

**2006-2009 Capital Expenditures and External Financing Required (\$m)**

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>Total 2006 - 2009</u>
<b><u>Distribution</u></b>					
Substation & Line Additions/Improvements	60	56	58	54	228
Replacements / Relocations / Emergency	62	60	63	71	256
<b>New Customer Construction</b>					
Meters	13	13	13	13	52
Transformers	27	28	29	31	115
Service & Line Extensions	121	123	126	129	499
Street Lights	4	4	4	4	16
<b>Subtotal, New Customer Construction</b>	<b>165</b>	<b>168</b>	<b>172</b>	<b>177</b>	<b>682</b>
<b>Total Distribution</b>	<b>287</b>	<b>284</b>	<b>293</b>	<b>302</b>	<b>1,166</b>
<b><u>General Plant</u></b>					
Computer Hardware/Software	43	35	53	53	184
Telecom Projects	7	7	13	13	40
Property & Other General Plant	10	13	19	20	62
<b>Total General Plant</b>	<b>60</b>	<b>55</b>	<b>85</b>	<b>86</b>	<b>286</b>
<b>Capitalized Property Taxes</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>22</b>
<b>Total Capital Expenditures</b>	<b>649</b>	<b>715</b>	<b>858</b>	<b>919</b>	<b>3,141</b>
<b>Net Cash Flow Before Capital Expenditures (3)</b>	<b>351</b>	<b>612</b>	<b>537</b>	<b>528</b>	<b>2,028</b>
<b>External Financing Required to Fund Capital Expenditures</b>	<b>\$ 298</b>	<b>\$ 103</b>	<b>\$ 321</b>	<b>\$ 391</b>	<b>\$ 1,113</b>

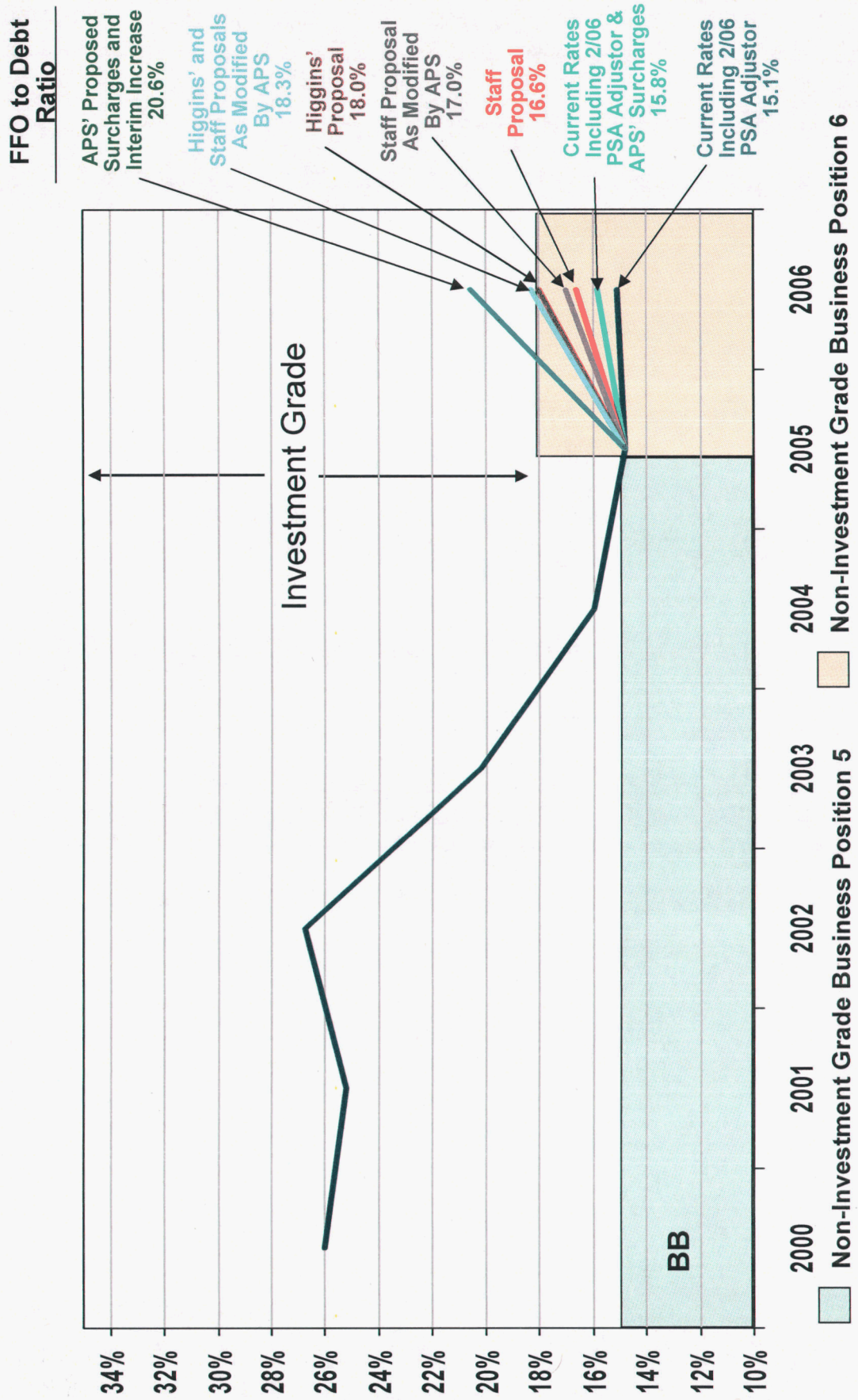
(1) TS5 will be northwest of the White Tank mountains

(2) TS1 will be northeast of the White Tank mountains; TS3 will be in the Goodyear area.

(3) Assumes 21.3% base rate increase is effective 1/1/2007

# Arizona Public Service Company

## Ratio of Funds from Operations (FFO) to Debt\*



\* Key financial ratio used by the credit rating agencies (Standard & Poor's and Moody's) to measure cash flow available to service debt



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## RESEARCH

## Annual 2005 Global Corporate Default Study And Rating Transitions

Publication date: 31-Jan-2006  
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 Devi Aurora, Director, New York (1) 212-438-1359;  
 devi\_aurora@standardandpoors.com

**(Editor's Note:** The tables in this article are designed for exporting in certain Standard & Poor's products; therefore, printing quality may vary. Changing your page orientation to landscape mode, reducing your page margins, and/or reducing the text size in your browser may improve the printed output.)

The key points presented in this study are as follows:

- The global corporate default rate for speculative-grade and investment-grade rated entities remained near all-time lows, reaching 0.55% at the end of 2005 from 0.73% in 2004 on an issuer-weighted basis.
- Globally, speculative-grade default rates have remained below the long-term (1981-2005) average of 4.65% for 23 consecutive months.
- In 2005, the total number of defaults (37) was the lowest recorded since 1997, but the global default rate is expected to edge up from its trough in 2006.
- A spate of high-profile defaults in the third and fourth quarters of 2005 raised the total amount of debt affected to US\$42.5 billion, the largest volume since 2003.
- Analysis of the transition rates over the four quarters ended December 2005 suggests that ratings behavior continues to exhibit consistency with long-term trends, showing a clear negative correlation between credit quality and default probability.
- Not surprisingly, low defaults coincided with high recovery rates, with ultimate recoveries in 2005 posting their highest rates in 10 years.
- Gini ratios displayed a high degree of ratings accuracy in terms of their historical ability of ratings to predict default. Among corporate entities rated by Standard & Poor's, an average one-year Gini coefficient of 84% was recorded; three-year 78%; five-year 75%; and seven-year 72%. (For details on Gini ratios, refer to Appendix II at the end of the report).
- Corporate rating behavior was consistent with the improving trends noted in other asset classes, notably global structured finance. Appendix III summarizes the key points from global structured finance relative to corporates.

A total of 37 corporate defaults were recorded globally in 2005, affecting rated debt worth US\$42.5 billion (see Charts 1 and 2). Of the total, the U.S. recorded 32 defaults, whereas Europe recorded one, affecting rated debt worth US\$41.6 billion and US\$378 million, respectively. The remaining four defaults were a Canada-based telecommunications company, a Japan-based automotive company, a Uruguay-based petroleum and natural gas company, and a confidentially rated default. This concentration is in part attributable to the larger rated population in the U.S. Table 3 provides an itemized list of all the defaults recorded in 2005. On an annual basis, the overall issuer-weighted default rate—including both investment-grade and speculative-grade entities—was 0.55%, the lowest rate since 1997 (see Table 1). One year earlier, 51 defaults had been recorded on rated debt worth US\$16.2 billion. The historical breakout of speculative-grade default rate by region is displayed in Table 2. At 1.35% in Dec. 2005, the global speculative-grade default rate has remained below the long-term (1981-2005) average of 4.65% for 23 consecutive months, but is still more than the record low of 1.3% posted in the second quarter of 1997.

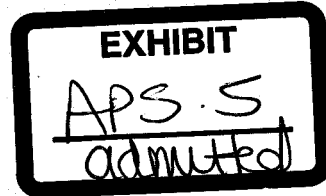
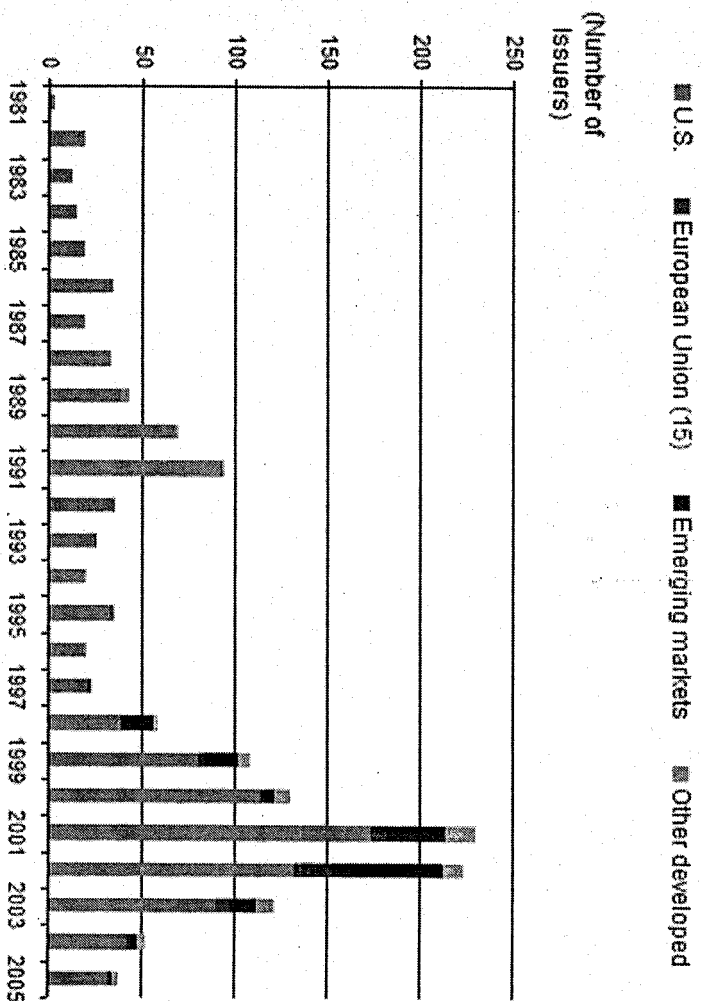


Chart 1

### Annual Corporate Defaults By Number Of Issuers

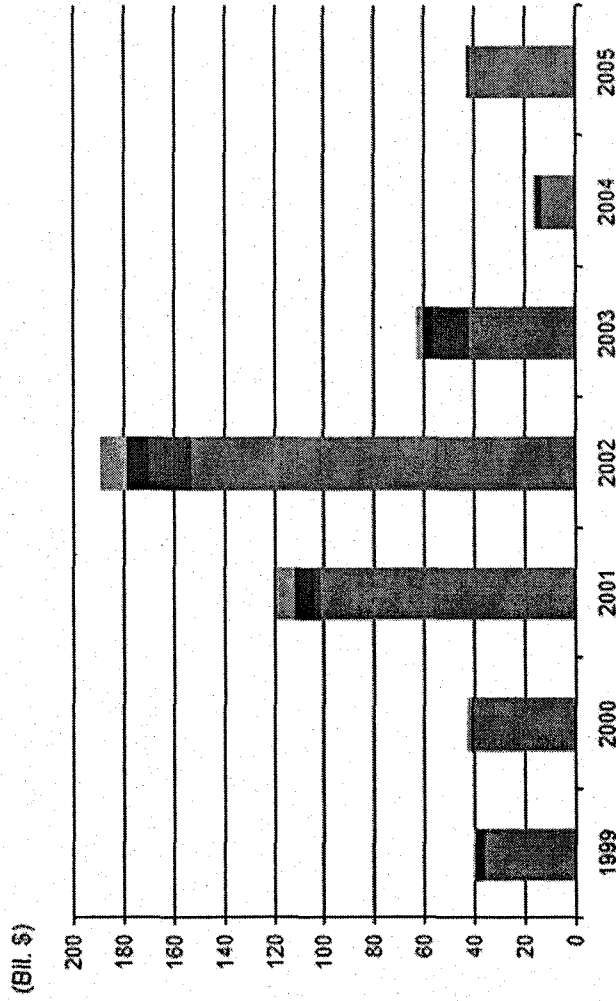


Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Chart 2

# Annual Global Corporate Defaulting Debt Amount

■ U.S. ■ European Union (15) ■ Emerging markets ■ Other developed



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Table 1 Global Corporate Default Summary

Year	Total defaults*	Investment-grade defaults	Speculative-grade defaults	Default rate (%)	Investment-grade default rate (%)	Speculative-grade default rate (%)	Total debt defaulting (bil. \$)
1981	2	0	2	0.1	0.0	0.6	0.1
1982	18	2	15	1.2	0.2	4.4	0.9
1983	12	1	10	0.8	0.1	2.9	0.4
1984	14	2	12	0.9	0.2	3.2	0.4
1985	19	0	18	1.1	0.0	4.3	0.3
1986	34	2	30	1.7	0.1	5.6	0.5
1987	19	0	19	0.9	0.0	2.8	1.6
1988	33	0	30	1.4	0.0	3.9	3.3
1989	42	2	34	1.7	0.1	4.5	7.3

1990	69	2	56	2.7	0.1	8.1	21.2
1991	94	3	65	3.3	0.2	11.0	23.6
1992	35	0	30	1.4	0.0	5.7	5.4
1993	25	0	13	0.5	0.0	2.3	2.4
1994	20	1	15	0.6	0.1	2.1	2.3
1995	35	1	29	1.0	0.0	3.5	9.0
1996	20	0	16	0.5	0.0	1.8	2.7
1997	23	2	20	0.6	0.1	2.0	4.9
1998	58	4	49	1.3	0.1	3.7	11.3
1999	108	4	92	2.2	0.1	5.5	37.8
2000	129	5	104	2.4	0.2	5.8	43.0
2001	229	6	173	3.8	0.2	9.6	118.8
2002	223	14	158	3.6	0.5	9.2	190.1
2003	121	3	90	1.9	0.1	4.9	62.5
2004	51	0	37	0.7	0.0	1.9	16.2
2005	37	1	29	0.6	0.0	1.3	42.0

\*This column includes companies that were no longer rated at the time of default. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

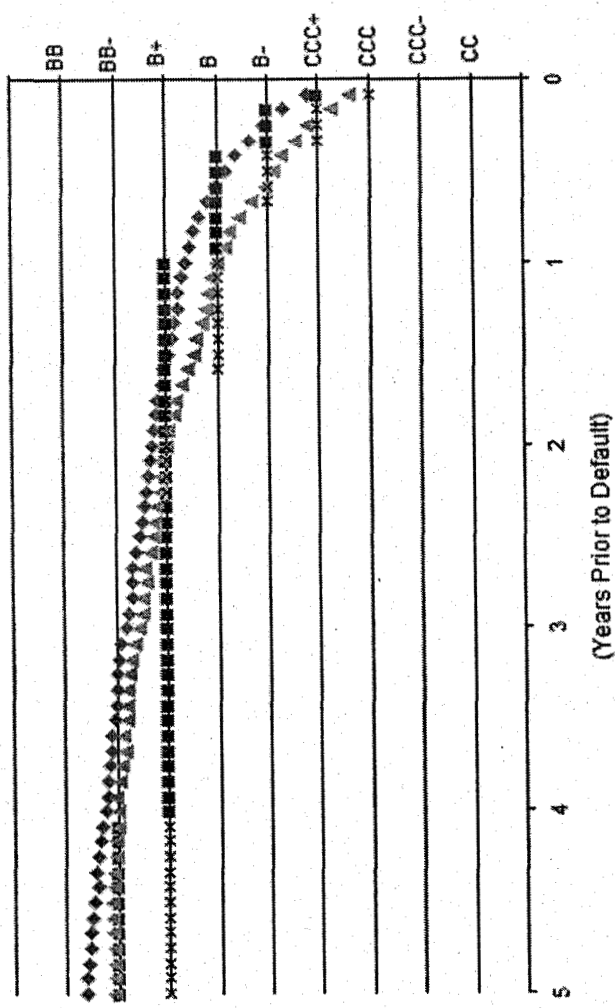
The majority of defaults in 2005 were in the industrial sector, which constituted 31 of 37 defaults. Other sectors recording defaults in 2005 were telecommunications, utilities, and financial institutions with two defaults each. Within the industrial segment, transportation companies were worst affected (seven defaults), followed by automotive (six) and consumer products (five). Forest products and building materials, metals mining and steel, and retail/restaurants recorded two defaults each in 2005.

The average time to default for the pool of 37 defaulting issuers in 2005 was 8.4 years. The average time to default was marked at 6.3, 7.6, 11.9, and 5.4 years during the four quarters of 2005, respectively. The longest time to default among the 2005 entities was 24.7 years recorded by a U.S.-based utility (Entergy New Orleans Inc.), whereas the shortest was seven months recorded by a Japanese automaker (Mitsubishi Motors Corp.). This entity defaulted seven months after it had regained a rating subsequent to a previous default in 2004. Mitsubishi Motors Corp. has received a series of capital infusions in the form of debt-for-equity exchanges in which the consideration was less than par value (tantamount to default). All but seven defaulting entities in 2005 were originally rated speculative grade (BBB+ or lower). Not surprisingly, defaulted entities originally assigned an investment grade rating (BBB- or higher) had a higher average time to default (14.0 years), nearly double that of entities that were originally rated speculative-grade (7.1 years). The rating path observed for defaulters in the trailing 12 quarters is broadly representative of the long-term ratings trend, which shows that both the average rating and median rating on all defaulting entities were in the speculative-grade category in the five years preceding default (see Chart 3).

Chart 3

Average And Median Rating Path Of Defaulters

- ◆ 1981-2005 average
- ▲ Trailing 12-quarter average
- 1981-2005 median
- × Trailing 12-quarter median



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Table 2 Annual Speculative-Grade Default Rate By Region					
Year	U.S. And Tax Havens*	European Union†	Emerging Markets	Others§	
1981	0.62	0.00	N.A.	N.A.	
1982	4.41	0.00	N.A.	N.A.	
1983	2.96	0.00	N.A.	0.00	
1984	3.29	0.00	N.A.	0.00	
1985	4.37	0.00	N.A.	0.00	
1986	5.71	0.00	N.A.	0.00	
1987	2.81	0.00	N.A.	0.00	
1988	3.99	0.00	N.A.	0.00	
1989	4.17	0.00	N.A.	37.50	

1990	7.88	0.00	N.A.	28.57
1991	10.69	50.00	N.A.	25.00
1992	5.86	0.00	N.A.	0.00
1993	2.21	20.00	0.00	0.00
1994	2.19	0.00	0.00	0.00
1995	3.62	8.33	0.00	0.00
1996	1.83	0.00	0.00	2.56
1997	2.15	0.00	0.00	1.89
1998	3.23	0.00	8.19	1.35
1999	5.16	6.58	7.14	5.00
2000	7.00	2.02	1.78	5.88
2001	10.51	7.34	5.88	12.12
2002	7.12	12.90	15.06	7.14
2003	5.55	3.42	3.39	5.08
2004	2.30	1.23	0.73	2.41
2005	1.88	0.56	0.21	1.18

\*U.S., Bermuda, and Cayman Islands, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and U.K.  
 Switzerland, Canada, Iceland, Isle of Man, Japan, Liechtenstein, Malta, Monaco, New Zealand, Norway, and Switzerland. N.A.—Not available. Sources: Standard & Poor's Global Fixed  
 Income Research and Standard & Poor's CreditPro® 7.02.

Table 3 2005 Defaults\*

Company	Country	Industry	Debt Amount (Mil.\$)	Default Date	Next To Last Rating	Date Of Next To Last Rating	First Rating	Date of First Rating
Inland Fiber Group LLC	U.S.	Forest products and building materials	225.0	1/13/2005	CCC	12/17/2003	B+	10/24/1997
Tower Automotive Inc.	U.S.	Automotive	1,156.5	2/2/2005	CCC	1/21/2005	BB	12/9/1997
Brown Jordan International, Inc.	U.S.	Consumer products	105.0	2/15/2005	NR	9/14/2004	B+	8/4/1999
Concordia Bus AB	Sweden	Transportation	378.0	2/15/2005	CC	1/19/2005	BB	1/17/2000
Wm-Dixie Stores Inc.	U.S.	Retail/restaurants	1,385.9	2/21/2005	CCC	2/11/2005	BBB-	9/26/2000
VMX Corp.	U.S.	Metals, mining, and steel	245.1	3/8/2005	CCC-	11/19/2004	BB	9/14/1994
Mitsubishi Motors Corp.	Japan	Automotive	0.0	3/10/2005	CC	1/31/2005	CCC+	7/29/2004
aaPharma Inc.	U.S.	Consumer products	175.0	4/1/2005	CC	3/17/2005	B+	3/19/2002
Vento Corp.	U.S.	High technology	9.3	4/1/2005	NR	10/19/2001	B-	5/25/2000
Eagle Picher Holdings Inc.	U.S.	Automotive	522.4	4/11/2005	CCC+	3/24/2005	B+	2/6/1998
SR Telecom Inc.	Canada	Telecommunications	60.7	4/22/2005	CC	1/20/2005	BB-	4/9/1998
Meridian Automotive Systems Inc.	U.S.	Automotive	485.0	4/26/2005	CCC+	2/14/2005	BB-	6/19/2000
Collins & Aikman Corp.	U.S.	Automotive	1,665.0	5/17/2005	CCC-	5/12/2005	A	12/31/1980
Administración Nacional de Combustibles Alcohol y Portland	Uruguay	Oil and gas exploration and production	0.0	5/31/2005	B	7/22/2004	BBB	8/15/2000

Salton Inc.	U.S.	Consumer products	275.0	6/15/2005	CCC	11/23/2004	B+	12/4/1998
Frontier Insurance Group, Inc.	U.S.	Insurance	0.0	7/5/2005	NR	3/24/2000	BBB+	3/31/1997
O'Sullivan Industries Holdings Inc.	U.S.	Consumer products	255.0	7/15/2005	CCC+	2/7/2005	B+	11/2/1999
Allied Holdings Inc.	U.S.	Transportation	150.0	7/31/2005	CCC-	6/10/2005	BB	9/2/1997
Anchor Glass Container Corp.	U.S.	Forest products and building materials	350.0	8/8/2005	CCC	6/28/2005	B+	1/24/2003
ASARCO Inc.	U.S.	Metals, mining, and steel	439.8	8/10/2005	CCC	7/12/2005	CCC+	12/9/2003
Foamex L.P./Foamex Capital Corp.	U.S.	Finance company	497.5	8/15/2005	CCC+	7/11/2005	B+	9/25/1992
Delta Air Lines Inc.	U.S.	Transportation	6,046.9	9/14/2005	CC	9/16/2004	A	12/30/1980
Delta Air Lines Inc. - Western Air Lines Inc.	U.S.	Transportation	0.0	9/14/2005	NR	6/15/1988	BB-	12/30/1980
Northwest Airlines Corp.	U.S.	Transportation	2,677.8	9/14/2005	CCC-	9/6/2005	BB-	7/18/1995
Northwest Airlines Corp. - Republic Airlines Inc.	U.S.	Transportation	0.0	9/14/2005	NR	2/1/1988	B+	1/5/1983
Entergy Corp - Entergy New Orleans Inc.	U.S.	Utility	155.0	9/23/2005	CCC+	9/20/2005	BBB+	12/30/1980
Charter Communications Inc. - Charter Communications Holdings, LLC	U.S.	Telecommunications	8,687.7	9/26/2005	CCC+	8/19/2003	BB	3/10/1999
Delphi Corp.	U.S.	Automotive	4,822.5	10/8/2005	CCC-	10/6/2005	BBB	2/17/1999
Boyd's Collection Ltd. (The)	U.S.	Consumer products	34.4	10/16/2005	CCC	5/18/2005	B+	4/15/1998
Refco Group Ltd., LLC U.S		Broker	1,265.0	10/17/2005	CC	10/14/2005	BB-	7/12/2004
Levitz Home Furnishings, Inc.	U.S.	Retail/restaurants	130.0	10/11/2005	NR	9/2/2005	B-	10/18/2004
FLYi Inc.	U.S.	Transportation	125.0	11/7/2005	CC	1/11/2005	B	9/29/1997
Curative Health Services Inc.	U.S.	Healthcare	185.0	12/20/2005	CCC+	8/10/2005	B	4/6/2004
Calpine Corp.	U.S.	Utility	9,559.5	12/6/2005	CCC-	12/2/2005	B	1/28/1994
(Three companies were confidentially rated.)			406.0					
Total			42,475					

\*Excludes three confidentially rated defaults. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro@ 7.02.

Within the speculative-grade category, the lower the original rating of an issuer, the shorter the time to default over the long term. For example, for the entire pool of defaulters (1981-2005), the average time to default for issuers that were originally rated in the 'BB' and 'B' rating categories was 5.9 years and 4.4 years, respectively, from initial rating (or from Dec. 31, 1980, the starting date of the study), whereas issuers in the 'CCC' rating category or lower had an average time to default of 2.6 years (see Table 4). Tables 4 and 5 display the median, average and standard deviations for the time to default from original as well as last rating. Note that the standard deviation of the times to default shrink progressively as one moves down the ratings ladder.

Table 4 Time To Default From Original Rating				
Original Rating	Defaults	Average Years From Original Rating*	Median Years From Original Rating	Standard Deviation Of Years From Original Rating
AAA	3	8.0	7.6	0.9
AA	18	12.0	10.1	6.1
A	58	12.5	10.7	6.5
BBB	133	8.0	6.4	5.9

BB	395	5.9	4.5	4.5
B	790	4.4	3.5	3.5
CCC/C	73	2.5	1.7	2.4
Total	1470	5.4	4.0	4.6

\*Or Dec. 31, 1980, whichever is later. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Table 5 Time To Default From Last Rating

Last Rating Prior to 'D'	Defaults	Average Years From Prior Rating	Median Years From Prior Rating	Standard Deviation of Years From Prior Rating
BBB	8	0.6	0.1	1.2
BB	28	1.6	1.3	1.5
B	291	1.2	0.7	1.3
CCC/C	852	0.4	0.2	0.6
N.R.	291	3.7	2.4	4.1
Total	1470	1.2	0.3	2.4

N.R.—Not rated. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

The incidence of defaults had been steadily trending down since its peak in 2002 but appears to have hit bottom in 2005 (see Chart 4). The seven defaults in the fourth quarter constituted the lowest number of defaults since the second quarter of 2004. In contrast, the volume of debt affected by the defaults rose to US\$19.6 billion and US\$16.1 billion in the third and fourth quarter of 2005, respectively, the highest levels since 2003 (see Chart 5). Most of the escalation in debt volume was attributable to the defaults by Charter Communications Inc., Delta Air Lines Inc., and Northwest Airlines Corp. in the third quarter and the defaults by Delphi Corp. and Calpine Corp. in the fourth quarter. For a listing of the largest defaults by year, refer to Table 6. In Europe, the dollar volume of debt defaulting shrank to US\$378 million from US\$1.3 billion one year earlier.

Table 6 Largest Global Rated Defaults By Year

Largest Corporate Defaulters By Outstanding Debt Amount		
Year Defaulted	Issuer	Amount (Mil. \$)
1991	Columbia Gas System	2,292
1992	Macy (R.H.) & Co.	1,396
1993	Mesa, Inc.	600
1994	Confederation Life Insurance	2,415
1995	Grand Union Co./Grand Union Capital	2,163
1996	Tiphook Finance	700
1997	Flagstar Corp.	1,021
1998	Service Merchandise Co.	1,326
1999	Integrated Health Services Inc.	3,394
2000	Owens Corning	3,299
2001	Enron Corp.	10,779



2002	WorldCom Inc.	30,000
2003	Parmalat Finanziaria SpA	7,177
2004	RCN Corp.	1,800
2005	Calpine Corp.	9,559

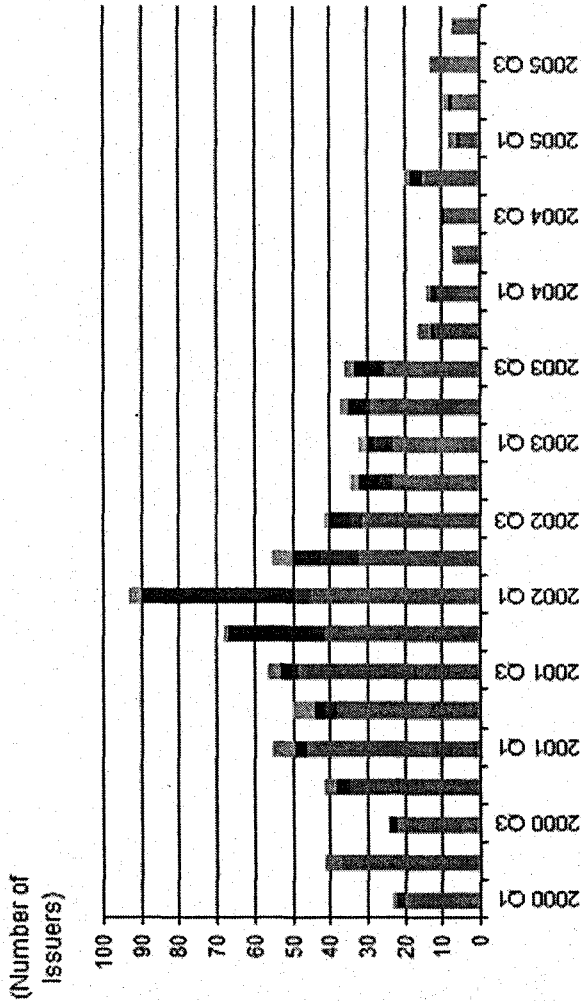
Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02

By industry, the highest default rates in 2005 were recorded in the transportation sector, followed by the broadly defined heavy industrials sector (comprised of aerospace, automotive, capital goods, and metals) and the consumer/service sector. Table 7 shows a historical breakout of global default rates by industry. The high default incidence among transportation, automotive, and consumer products entities is broadly mirrored in the industry concentration at the top rungs of the weakest links of the past 18 months.

Chart 4

### Quarterly Corporate Defaults By Number Of Issuers

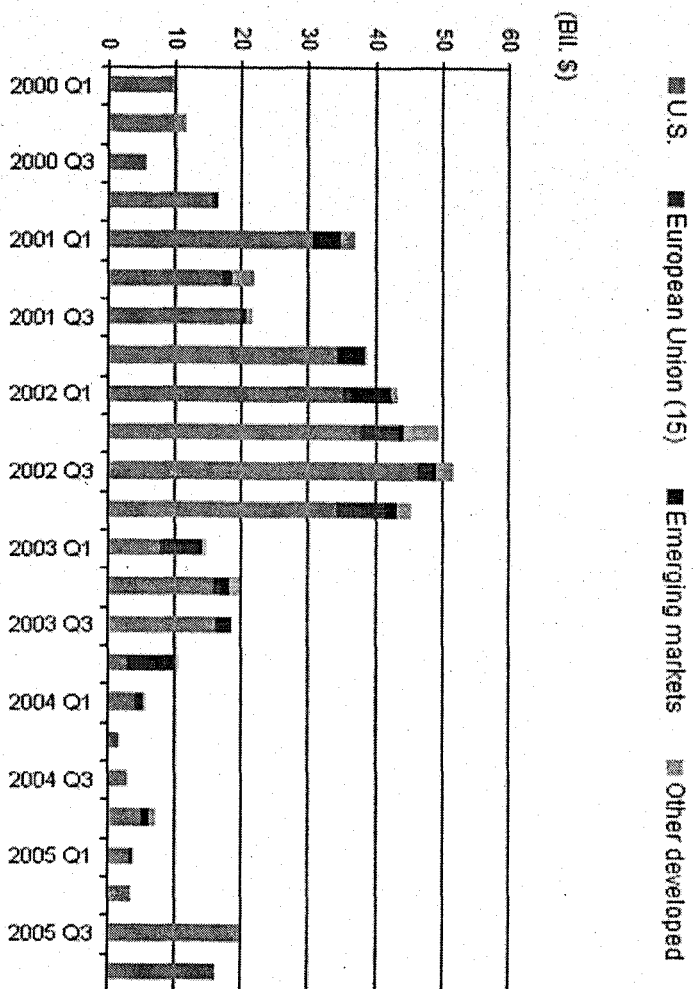
■ U.S. ■ European Union (15) ■ Emerging markets ■ Other developed



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02

Chart 5

## Quarterly Global Corporate Defaulting Debt Amount



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Table 7 Annual Default Rates By Industry (%)

Year	Aerospace / automotive / capital goods / metal	Consumer / service sector	Energy and natural resources	Financial institutions	Forest and building products / homebuilders	Health care / chemicals	High technology / computers / office equipment	Insurance	Leisure time / media	Real estate	Telecommunications	Transportation	Utility
1981	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04	0.00
1982	1.26	1.63	0.80	1.02	2.70	0.00	1.47	2.78	2.08	0.00	0.00	2.02	0.40
1983	0.89	1.23	2.52	0.00	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.99	0.00
1984	0.00	0.40	4.72	0.00	1.39	0.00	2.99	0.00	1.52	0.00	0.00	2.91	0.00
1985	1.23	1.54	4.72	0.00	0.00	2.08	0.00	1.52	2.50	0.00	0.00	0.00	0.00
1986	4.56	0.34	9.02	0.00	1.25	1.87	3.53	0.00	0.94	0.00	0.00	0.87	0.00
1987	1.79	1.31	4.42	0.00	1.09	0.83	0.00	0.00	0.72	0.00	1.37	0.00	0.37
1988	1.12	1.90	1.94	1.99	1.01	3.17	0.00	0.00	3.16	0.00	1.28	0.00	0.72

1989	2.32	1.25	0.00	2.48	0.00	0.00	0.00	1.01	0.58	7.24	9.38	0.00	1.69	0.00
1990	1.98	4.76	0.00	1.43	7.92	0.00	0.00	4.60	0.00	9.70	8.00	2.60	3.60	0.00
1991	3.02	6.62	2.97	1.90	7.95	1.75	0.00	2.78	1.83	6.90	5.56	0.00	6.00	0.69
1992	1.72	2.79	0.93	1.83	1.30	0.00	0.00	4.35	0.00	1.83	5.56	0.00	0.00	0.98
1993	1.65	1.00	1.65	0.24	0.00	0.00	0.00	2.63	0.00	0.81	0.00	0.00	0.00	0.00
1994	0.40	1.21	0.78	0.00	0.95	0.60	0.00	1.18	0.26	2.82	0.00	0.00	1.60	0.00
1995	0.00	3.66	0.69	0.51	2.50	1.10	0.00	1.06	0.23	1.72	0.00	0.00	2.36	0.00
1996	0.96	1.85	0.62	0.00	0.00	0.00	0.00	0.00	0.00	1.94	0.00	0.95	0.00	0.00
1997	0.88	2.40	0.00	0.27	0.00	0.47	0.00	0.93	0.22	0.44	0.00	1.65	0.71	0.00
1998	1.02	3.28	1.42	1.21	1.14	2.07	0.00	0.00	0.00	2.81	0.77	1.18	1.85	0.00
1999	3.82	3.10	5.00	0.25	1.55	3.10	1.23	0.92	0.92	5.09	0.00	1.88	4.89	0.20
2000	3.81	5.25	0.88	0.12	3.57	4.30	4.29	4.88	0.71	4.03	0.00	2.98	4.49	0.38
2001	9.45	5.97	1.73	1.53	4.28	4.18	4.88	1.82	0.00	4.91	0.00	11.11	3.39	0.53
2002	5.36	2.92	3.31	0.73	4.86	1.81	1.82	0.96	0.96	5.83	0.56	17.01	4.92	4.17
2003	3.51	3.04	1.19	0.29	1.11	2.48	2.29	0.68	0.68	0.66	0.00	10.60	2.37	1.51
2004	2.26	1.58	0.78	0.09	1.59	0.32	0.00	0.00	0.00	0.94	0.00	1.45	0.99	0.17
2005	1.33	1.01	0.36	0.09	0.48	0.86	0.00	0.00	0.00	0.62	0.00	0.44	2.27	0.32

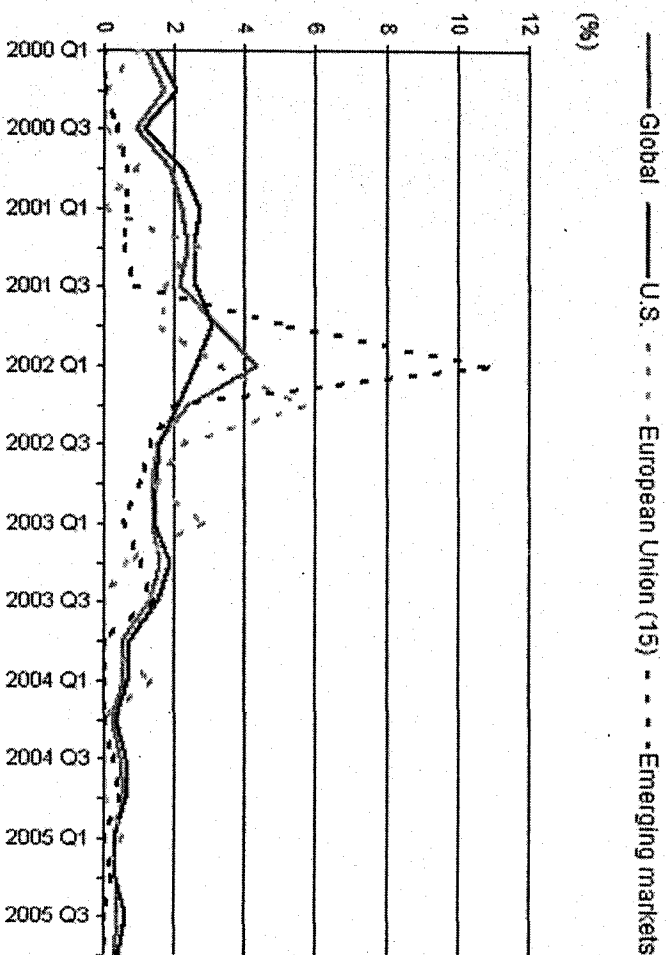
Includes investment-grade and speculative-grade rated entities. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro@ 7.02.

The trend in the quarterly default rate—defined as the number of defaulting entities as a proportion of total entities rated by Standard & Poor's—corroborates the compression in defaults. The EU speculative-grade default rate showed the greatest deceleration relative to its 2002 peak, but volatility in this series is in part exacerbated by the smaller size of the underlying population (see Chart 6).

The deceleration in defaults can also be seen in the trailing 12-month default rate (see Chart 7). Globally, the speculative-grade default rate has sunk to levels not seen since 1997. This phenomenon is mirrored in both the U.S. and European bond markets. The 12-month rolling speculative-grade default rate for the U.S. remains at its lowest level since June 1997, having reached 1.88% at the end of December. The trailing 12 month speculative grade default rate for Europe was 0.56%.

The global speculative-grade default rate is now a fraction of its long-term (1981-2005) average of 4.65%, but still slightly higher than the record low of 1.28% posted in April 1997. The U.S. speculative-grade default rate is also lower than its long-term (1981-2005) average of 4.70%. European speculative-grade default rates have remained very low with only one observed default in the trailing 12 months. Steep declines were also seen in the emerging markets, which recorded a 0.21% default rate at the end of 2005 versus 3.39% at the end of 2003 and 15.06% at the end of 2002. One emerging markets default has been observed in the trailing 12 months: Administracion Nacional de Combustibles Alcohol y Portland of Uruguay.

Chart 6

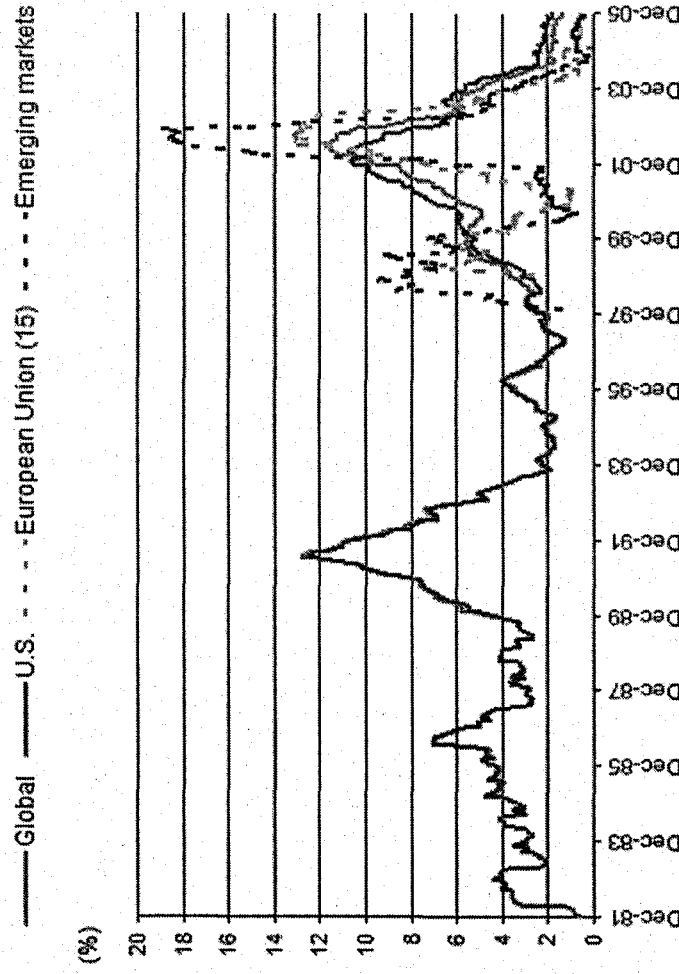
**Speculative-Grade Quarterly Default Rate**

Default rates in this figure are for the trailing three months. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

The growth in ratings penetration in the speculative-grade segment had no visible deleterious impact on the default rate, which continued to decrease relative to the peak in 2002, even though the proportion of issuers rated speculative grade showed no decline. This is true not only globally, but also at the regional level for the U.S. and Europe (see Charts 8, 9, and 10). The EU displays a flatter trend in the proportion of speculative-grade issuers compared with the U.S., but even here there is no evidence of a decline (see Chart 10). Factors such as abundant liquidity, an accommodative monetary policy by major central banks (interest rates remain historically low notwithstanding a turnaround among central banks in certain regions, e.g., the U.S. and Canada), and a continued large appetite for risk among investors appear to have facilitated adequate financing opportunities to a growing universe of speculative-grade rated companies.

Chart 7

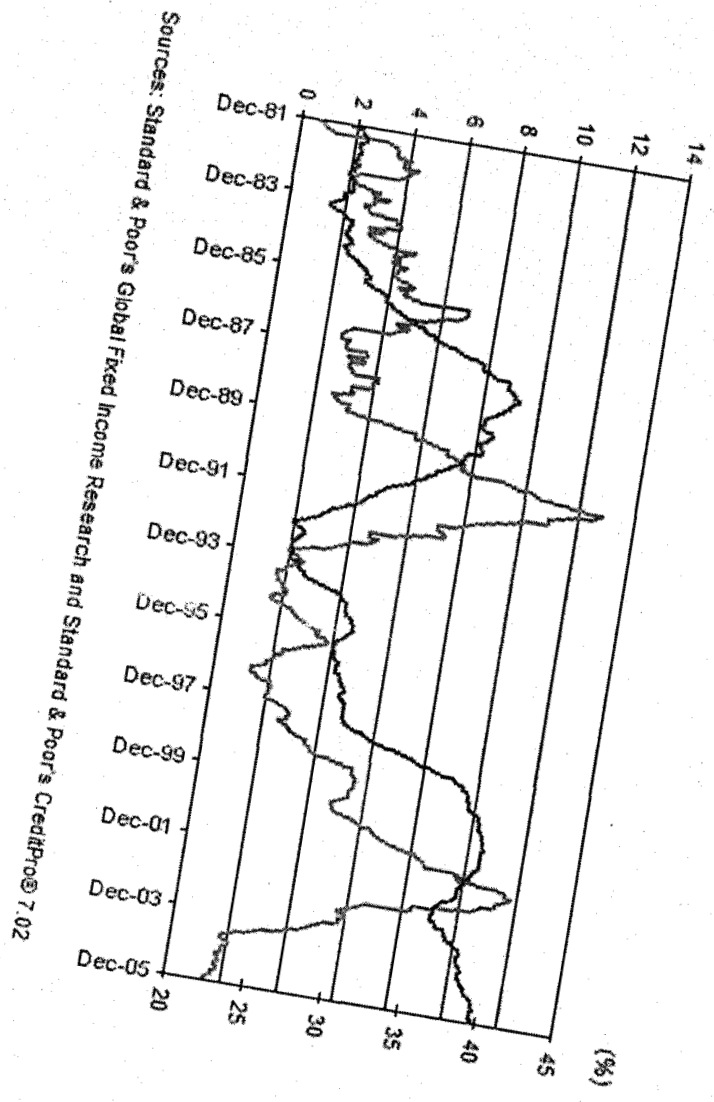
### Trailing 12-Month Speculative-Grade Default Rate



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

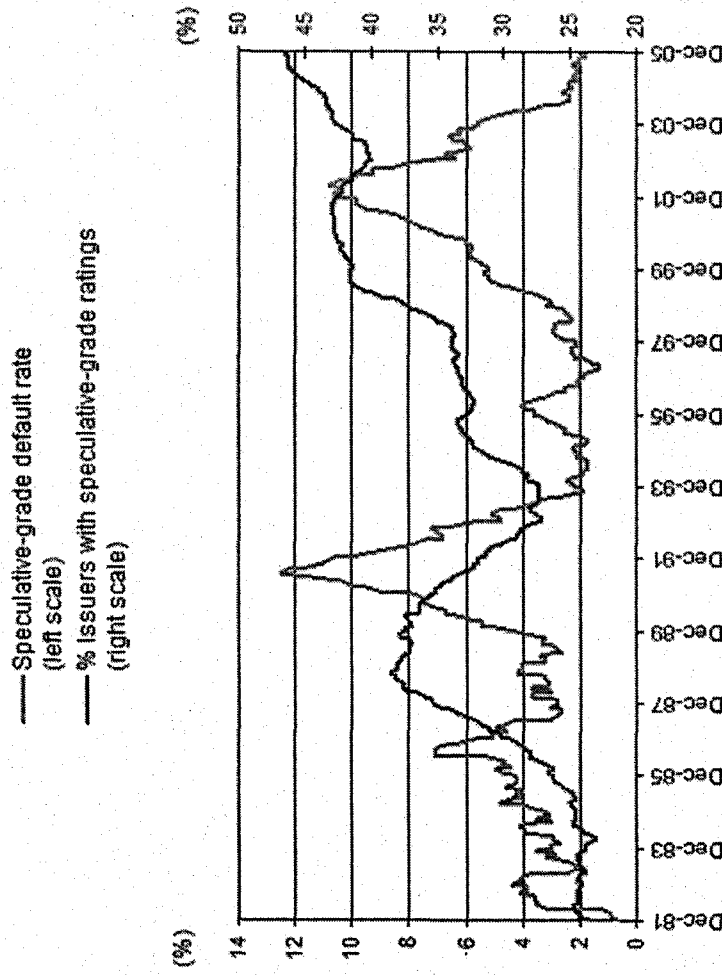
Chart 8  
Global Speculative-Grade Default Rate Versus Credit Quality

— Speculative-grade default rate (left scale)  
— % Issuers with speculative-grade ratings (right scale)



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02

Chart 9  
**U.S. Speculative-Grade Default Rate Versus Credit Quality**

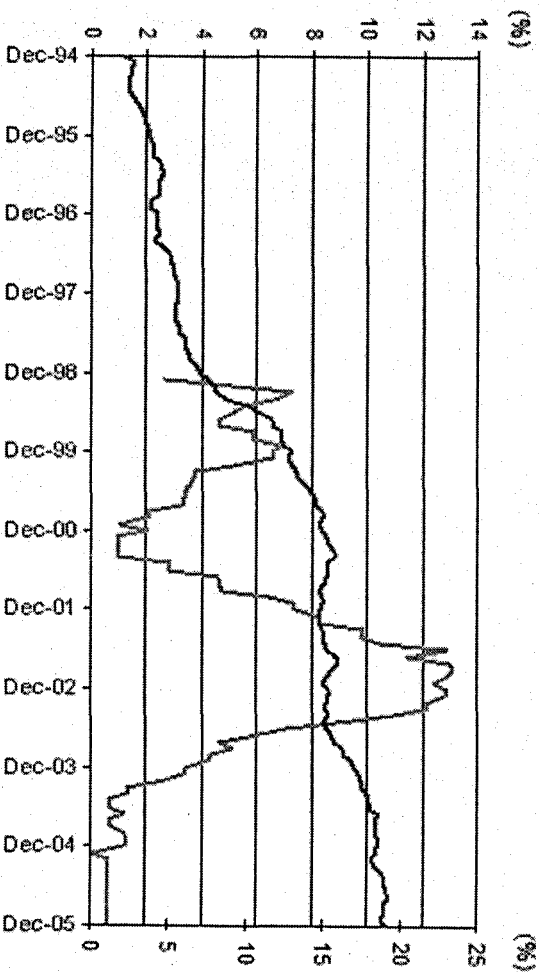


Data for U.S. includes tax havens (Bermuda and Cayman Islands). Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Chart 10

### European Union Speculative-Grade Default Rate Versus Credit Quality

— Speculative-grade default rate  
(left scale)  
— % Issuers with speculative-grade ratings  
(right scale)



European Union aggregate includes EU-15 countries only. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Analysis of the transition rates over the four quarters ended December 2005 suggests that ratings behavior continues to exhibit consistency with long-term trends, showing a clear negative correlation between credit quality and default probability. Table 8 demonstrates that investment grade rated issuers—globally as well as in the U.S. and Europe—tend to exhibit less ratings volatility than their speculative-grade counterparts. For instance, the probability that any issuer rated 'AA' at the beginning of this period (i.e., Jan. 1, 2005) will still be rated 'AA' at the end of this period (i.e., Dec. 31, 2005) is 90.66%, whereas the probability that an issuer rated 'B' will be rated 'B' at the end of the four quarters is only 70.59%. The same relationship holds even when the transition rates are analyzed separately for the U.S., Europe, or the emerging markets (see Table 8).

Table 8 2005 Transition Rates By Region (%)

From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
Global									



AAA	88.78	9.18	1.02	0.00	0.00	0.00	0.00	0.00	1.02
AA	0.00	90.66	4.91	0.49	0.00	0.00	0.00	0.00	3.93
A	0.08	1.63	88.89	4.41	0.00	0.00	0.00	0.00	4.98
BBB	0.00	0.20	5.93	84.04	3.06	0.46	0.00	0.07	6.25
BB	0.00	0.00	0.00	5.71	76.75	6.90	0.20	0.20	10.25
B	0.00	0.00	0.10	0.59	8.51	70.59	3.76	1.58	14.85
CCC/C	0.00	0.00	0.00	0.79	0.79	25.40	46.83	8.73	17.46

**U.S.**

AAA	88.89	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	0.00	93.13	3.75	0.00	0.00	0.00	0.00	0.00	3.13
A	0.19	0.93	90.17	5.94	0.00	0.00	0.00	0.00	2.78
BBB	0.00	0.26	2.33	88.86	4.27	0.65	0.00	0.13	3.50
BB	0.00	0.00	0.00	3.59	78.28	8.98	0.36	0.36	8.44
B	0.00	0.00	0.14	0.29	5.58	72.39	4.72	2.15	14.74
CCC/C	0.00	0.00	0.00	1.33	0.00	18.67	50.67	10.67	18.67

**European Union**

AAA	77.78	11.11	5.56	0.00	0.00	0.00	0.00	0.00	5.56
AA	0.00	81.95	9.77	1.50	0.00	0.00	0.00	0.00	6.77
A	0.00	2.49	85.08	3.59	0.00	0.00	0.00	0.00	8.84
BBB	0.00	0.40	7.26	79.44	2.42	0.81	0.00	0.00	9.68
BB	0.00	0.00	0.00	5.05	62.63	14.14	0.00	0.00	18.18
B	0.00	0.00	0.00	0.00	7.89	68.42	2.63	0.00	21.05
CCC/C	0.00	0.00	0.00	0.00	0.00	20.00	40.00	20.00	20.00

**Emerging markets**

AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	0.00	87.50	12.50	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	4.00	92.00	1.33	0.00	0.00	0.00	0.00	2.67
BBB	0.00	0.00	13.68	78.30	0.47	0.00	0.00	0.00	7.55
BB	0.00	0.00	0.00	7.66	81.85	0.81	0.00	0.00	9.68
B	0.00	0.00	0.00	2.19	16.39	69.95	0.55	0.55	10.38
CCC/C	0.00	0.00	0.00	0.00	0.00	42.50	47.50	0.00	10.00

N.R.—Not rated. Sources: Standard &amp; Poor's Global Fixed Income Research and Standard &amp; Poor's CreditPro® 7.02.

Table 9 Global Average One-Year Transition Rates, 1981 - 2005 (%)

From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	88.20	7.67	0.49	0.09	0.06	0.00	0.00	0.00	3.49

AA	0.58	87.16	7.63	0.58	0.06	0.11	0.02	0.01	3.85
A	0.05	1.90	87.24	5.59	0.42	0.15	0.03	0.04	4.58
BBB	0.02	0.16	3.85	84.13	4.27	0.76	0.17	0.27	6.37
BB	0.03	0.04	0.25	5.26	75.74	7.36	0.90	1.12	9.29
B	0.00	0.05	0.19	0.31	5.52	72.67	4.21	5.38	11.67
CCC/C	0.00	0.00	0.28	0.41	1.24	10.92	47.06	27.02	13.06

N.R.—Not rated. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

This pattern correlates with the long-term (1981-2005) trend of ratings behavior among all global rated issuers. This study—in line with previous default studies—confirms that companies to which Standard & Poor's assigns higher ratings are more stable than lower-rated companies. 'AAA' rated issuers were still rated 'AAA' one year later 88.20% of the time and 'CCC/C' ratings remained 'CCC/C' 47.06% of the time (see Table 9). These long-term relationships do not change even when default rates are broken out by region (see Table 10) or when entities that are not rated at some point during their rating history are removed from consideration (see Table 11).

Table 10 Average One-Year Transition Rates, 1981 - 2005 (%)

From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
<i>U.S.</i>									
AAA	88.68	6.80	0.53	0.04	0.09	0.00	0.00	0.00	3.86
AA	0.60	87.14	7.39	0.67	0.07	0.15	0.03	0.01	3.94
A	0.06	1.86	87.14	5.70	0.50	0.18	0.04	0.05	4.46
BBB	0.02	0.17	3.76	84.09	4.55	0.77	0.13	0.28	6.23
BB	0.05	0.06	0.31	5.49	75.26	8.01	0.76	1.09	8.98
B	0.00	0.06	0.20	0.30	5.18	73.43	4.32	5.38	11.13
CCC/C	0.00	0.00	0.36	0.54	1.35	9.34	47.62	27.22	13.57
<i>European Union</i>									
AAA	87.32	8.99	0.64	0.16	0.00	0.00	0.00	0.00	2.89
AA	0.21	86.37	9.28	0.46	0.00	0.00	0.00	0.00	3.69
A	0.00	2.19	87.37	4.89	0.19	0.03	0.00	0.00	5.34
BBB	0.00	0.20	4.62	82.76	2.54	0.65	0.13	0.26	8.85
BB	0.00	0.00	0.00	3.04	72.68	8.43	0.51	0.67	14.67
B	0.00	0.00	0.26	0.51	5.91	63.75	4.88	4.88	19.79
CCC/C	0.00	0.00	0.00	0.00	0.00	13.51	29.73	51.35	5.41
<i>Emerging markets</i>									
AAA	90.91	2.27	0.00	0.00	0.00	0.00	0.00	0.00	6.82
AA	1.15	81.61	11.49	1.15	0.00	1.15	0.00	0.00	3.45
A	0.00	1.77	87.39	7.08	0.66	0.66	0.00	0.00	2.43
BBB	0.00	0.00	4.11	84.56	4.84	1.48	0.82	0.16	4.02

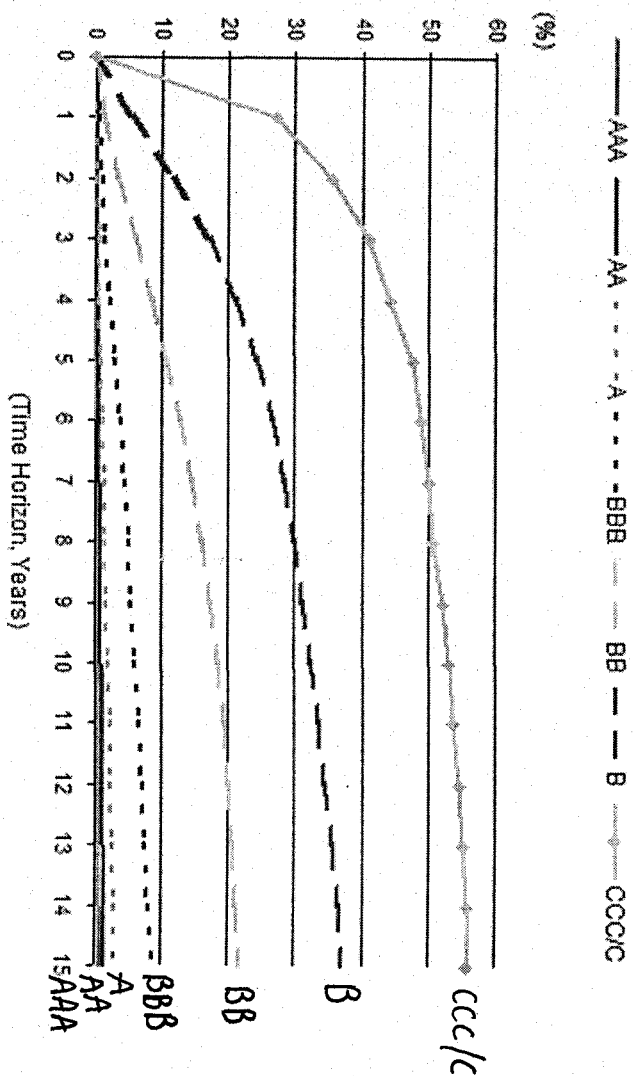
BB		0.00	0.00	0.07	4.35	79.54	4.15	2.11	1.63	8.16
B		0.00	0.00	0.10	0.39	8.11	70.90	3.22	4.88	12.40
CCC/C		0.00	0.00	0.00	0.00	0.82	18.78	49.80	20.82	9.80
N.R.—Not rated. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.										

Table 11 Average One-Year N.R.-Removed Transition Rates, 1981 - 2005 (%)										
From/To	AAA	AA	A	BBB	BB	B	CCC/C	D		
AAA	91.42	7.92	0.51	0.09	0.06	0.00	0.00	0.00		
AA	0.61	90.68	7.91	0.61	0.05	0.11	0.02	0.01		
A	0.05	1.99	91.43	5.86	0.43	0.16	0.03	0.04		
BBB	0.02	0.17	4.08	89.94	4.55	0.79	0.18	0.27		
BB	0.04	0.05	0.27	5.79	83.61	8.06	0.99	1.20		
B	0.00	0.06	0.22	0.35	6.21	82.49	4.76	5.91		
CCC/C	0.00	0.00	0.32	0.48	1.45	12.63	54.71	30.41		
Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.										

All of Standard & Poor's default studies have found a clear correlation between credit quality and default remoteness: the higher the rating the lower the probability of default, and vice versa. Over each time span, lower ratings correspond to higher default rates (see Tables 12 and 13 and Chart 11). This property also holds true in each region worldwide (see Table 14).

Chart 11

### Cumulative Average Default Rates By Rating, 1981 - 2005



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Table 12 Cumulative Average Default Rates, 1981 - 2005 (%)

Rating	--Time Horizon (Year)--														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AAA	0.00	0.00	0.03	0.06	0.10	0.17	0.24	0.36	0.40	0.44	0.44	0.44	0.44	0.51	0.58
AA	0.01	0.04	0.09	0.19	0.29	0.40	0.52	0.62	0.71	0.81	0.91	1.01	1.12	1.22	1.28
A	0.04	0.12	0.23	0.38	0.59	0.81	1.06	1.29	1.55	1.83	2.06	2.26	2.44	2.60	2.85
BBB	0.27	0.76	1.32	2.06	2.83	3.56	4.15	4.76	5.27	5.82	6.37	6.80	7.29	7.77	8.32
BB	1.12	3.33	5.96	8.45	10.65	12.77	14.45	15.90	17.26	18.29	19.25	19.97	20.62	21.05	21.58
B	5.38	11.80	17.14	21.24	24.16	26.45	28.37	29.91	31.15	32.38	33.48	34.44	35.44	36.34	37.18
CCC/C	27.02	35.63	40.93	44.39	47.56	48.78	49.98	50.64	52.17	53.05	53.79	54.57	55.19	55.90	55.90
Investment grade	0.11	0.31	0.54	0.85	1.18	1.51	1.81	2.10	2.37	2.65	2.91	3.12	3.34	3.55	3.81
Speculative grade	4.65	9.22	13.28	16.59	19.18	21.33	23.11	24.55	25.86	26.99	28.01	28.86	29.69	30.38	31.04
All rated	1.61	3.21	4.66	5.90	6.92	7.80	8.52	9.14	9.70	10.22	10.69	11.08	11.47	11.83	12.20

Sources: Standard &amp; Poor's Global Fixed Income Research and Standard &amp; Poor's CreditPro® 7.02.

Table 13 N.R.-Removed Cumulative Average Default Rates, 1981 - 2005 (%)																
--Time Horizon (Year)--																
Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
AAA	0.00	0.00	0.03	0.07	0.11	0.20	0.30	0.47	0.53	0.60	0.60	0.60	0.60	0.60	0.60	0.60
AA	0.01	0.03	0.08	0.16	0.25	0.38	0.54	0.68	0.79	0.92	1.03	1.16	1.28	1.40	1.40	1.50
A	0.04	0.13	0.25	0.42	0.64	0.86	1.11	1.34	1.62	1.90	2.11	2.29	2.48	2.63	2.63	2.91
BBB	0.27	0.81	1.40	2.25	3.11	3.97	4.67	5.35	5.93	6.63	7.34	7.96	8.68	9.52	10.29	
BB	1.20	3.71	6.86	9.94	12.74	15.57	18.02	20.27	22.39	24.04	25.66	27.00	28.09	28.85	29.93	
B	5.91	13.60	20.55	26.23	30.48	34.01	37.23	40.15	42.36	44.75	46.82	48.49	50.25	52.15	53.72	
CCC/C	30.41	40.02	46.13	50.55	56.04	58.53	59.63	60.43	64.38	67.72	67.72	67.72	67.72	69.19	69.19	
Investment grade	0.11	0.32	0.56	0.89	1.24	1.59	1.91	2.22	2.50	2.81	3.08	3.32	3.57	3.84	4.14	
Speculative grade	5.05	10.32	15.33	19.61	23.12	26.20	28.90	31.34	33.50	35.46	37.17	38.57	39.86	41.13	42.35	
All rated	1.67	3.36	4.91	6.24	7.34	8.28	9.07	9.76	10.36	10.92	11.40	11.80	12.19	12.58	12.98	

Sources: Standard &amp; Poor's Global Fixed Income Research and Standard &amp; Poor's CreditPro® 7.02.

The only exceptions occur when the number of defaults is very small, for example, among the higher rating categories at the rating modifier level (see Table 15). Issuers in investment-grade rating categories seldom default, so the number of defaults among these rating categories is very low. This small sample size can result in historical default rates that are counterintuitive. This does not imply, for example, that 'A+' rated companies are more risky than 'A' rated companies, but rather that both are very remote from default.

For additional detail on transition rates, please refer to tables in Appendix I.

Table 14 Cumulative Average Default Rates By Geographic Region, 1981 - 2005 (%)																
--Time Horizon (Year)--																
Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
U.S.																
AAA	0.00	0.00	0.00	0.00	0.00	0.05	0.11	0.23	0.29	0.35	0.35	0.35	0.35	0.45	0.55	
AA	0.01	0.03	0.09	0.18	0.28	0.40	0.53	0.62	0.68	0.77	0.84	0.91	0.99	1.05	1.12	
A	0.05	0.16	0.30	0.47	0.68	0.92	1.19	1.45	1.75	2.06	2.30	2.50	2.68	2.85	3.10	
BBB	0.28	0.72	1.19	1.89	2.62	3.35	3.96	4.59	5.14	5.73	6.31	6.75	7.24	7.74	8.30	
BB	1.09	3.22	5.81	8.22	10.29	12.37	14.01	15.44	16.81	17.87	18.86	19.61	20.27	20.72	21.25	
B	5.38	11.83	17.25	21.38	24.39	26.74	28.68	30.22	31.44	32.65	33.76	34.74	35.75	36.65	37.49	
CCC/C	27.22	37.02	42.78	46.66	50.07	51.39	52.63	53.28	54.79	55.65	56.39	57.15	57.75	58.44	58.44	
Investment grade	0.12	0.32	0.54	0.85	1.19	1.55	1.87	2.19	2.49	2.81	3.09	3.31	3.54	3.76	4.04	
Speculative grade	4.70	9.39	13.56	16.90	19.50	21.67	23.44	24.88	26.19	27.31	28.35	29.22	30.06	30.76	31.42	
All rated	1.75	3.53	5.11	6.45	7.54	8.49	9.28	9.95	10.57	11.14	11.65	12.06	12.47	12.84	13.24	

Rating	--Time Horizon (Year)--														
	1	2	3	4	5	6	7								
<b>European Union</b>															
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
AA	0.00	0.06	0.11	0.24	0.39	0.55	0.64								
A	0.00	0.00	0.04	0.14	0.30	0.44	0.68								
BBB	0.26	0.57	1.05	1.17	1.17	1.17	1.17								
BB	0.67	2.30	4.08	5.09	6.88	8.06	8.88								
B	4.88	13.30	18.69	20.27	20.95	22.77	25.86								
CCC/C	51.35	51.35	51.35	51.35	51.35	51.35	51.35								
Investment grade	0.06	0.13	0.25	0.35	0.47	0.58	0.70								
Speculative grade	4.12	8.21	11.25	12.44	13.75	15.13	16.65								
All rated	0.56	1.09	1.51	1.71	1.92	2.12	2.33								
--Time Horizon (Year)--															
Rating	1	2	3	4	5										
Emerging Markets															
AAA	0.00	0.00	0.00	0.00	0.00										
AA	0.00	0.00	0.00	0.00	0.00										
A	0.00	0.00	0.00	0.00	0.00										
BBB	0.16	1.56	3.51	6.21	8.99										
BB	1.63	5.16	9.01	13.07	16.56										
B	4.88	9.57	13.14	16.74	18.46										
CCC/C	20.82	23.39	25.50	26.56	28.12										
Investment grade	0.11	1.04	2.33	4.08	5.85										
Speculative grade	4.56	8.43	12.04	15.71	18.48										
All rated	2.80	5.49	8.15	10.99	13.30										

Sources: Standard &amp; Poor's Global Fixed Income Research and Standard &amp; Poor's CreditPro® 7.02.

Table 15 Cumulative Average Default Rates By Rating Modifier, 1981 - 2005 (%)															
Rating	--Time Horizon (Year)--														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AAA	0.00	0.00	0.03	0.06	0.10	0.17	0.24	0.36	0.40	0.44	0.44	0.44	0.44	0.51	0.58
AA+	0.00	0.00	0.00	0.07	0.15	0.24	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
AA	0.00	0.00	0.00	0.07	0.15	0.22	0.34	0.48	0.61	0.74	0.85	0.92	1.08	1.17	1.22
AA-	0.02	0.10	0.23	0.36	0.51	0.67	0.81	0.89	0.97	1.07	1.17	1.36	1.43	1.59	1.69
A+	0.05	0.11	0.26	0.47	0.63	0.80	0.98	1.16	1.38	1.60	1.83	2.11	2.36	2.64	2.89
A	0.04	0.12	0.17	0.25	0.42	0.63	0.84	1.09	1.36	1.72	2.02	2.18	2.36	2.46	2.74

A-	0.04	0.15	0.30	0.50	0.80	1.11	1.50	1.73	2.03	2.25	2.35	2.51	2.63	2.77	2.92
BBB+	0.20	0.58	1.11	1.57	2.08	2.63	3.07	3.46	3.90	4.25	4.59	4.85	5.28	5.92	6.64
BBB	0.28	0.60	0.91	1.56	2.24	2.87	3.43	4.11	4.67	5.33	6.06	6.54	7.08	7.26	7.65
BBB-	0.36	1.19	2.11	3.34	4.52	5.60	6.42	7.18	7.73	8.36	8.87	9.44	9.90	10.73	11.33
BB+	0.59	1.62	3.35	4.94	6.29	7.62	8.88	9.41	10.43	11.20	11.75	12.24	12.67	13.14	14.02
BB	0.87	2.78	5.14	7.32	9.43	11.56	13.20	14.69	15.86	16.81	17.87	18.71	19.08	19.18	19.29
BB-	1.62	4.77	8.14	11.39	14.16	16.71	18.68	20.61	22.31	23.57	24.66	25.42	26.42	27.11	27.77
B+	2.86	7.99	12.85	16.96	19.93	22.19	24.26	26.00	27.46	28.97	30.24	31.31	32.44	33.57	34.51
B	7.78	15.61	21.24	25.20	27.91	30.26	31.79	32.98	33.95	34.93	35.92	36.91	37.99	38.72	39.62
B-	11.22	20.45	27.46	31.92	35.14	37.59	39.66	40.97	41.76	42.27	42.83	43.24	43.46	43.70	43.95
CCC/C	27.02	35.63	40.93	44.39	47.56	48.78	49.98	50.64	52.17	53.05	53.79	54.57	55.19	55.90	55.90
Investment grade	0.11	0.31	0.54	0.85	1.18	1.51	1.81	2.10	2.37	2.65	2.91	3.12	3.34	3.55	3.81
Speculative grade	4.65	9.22	13.28	16.59	19.18	21.33	23.11	24.55	25.86	26.99	28.01	28.86	29.69	30.38	31.04
All rated	1.61	3.21	4.66	5.90	6.92	7.80	8.52	9.14	9.70	10.22	10.69	11.08	11.47	11.83	12.20

Sources: Standard &amp; Poor's Global Fixed Income Research and Standard &amp; Poor's CreditPro® 7.02.

A quantitative measure of ratings performance—the historical ability of ratings to predict default—for corporate entities rated by Standard & Poor's is displayed in the charts below. In order to measure ratings performance or ratings accuracy, the cumulative share of issuers by rating is plotted against the cumulative share of defaulters in a Lorenz curve to show visually the accuracy of its rank ordering (for definition and methodology, refer to Appendix II at the end of the report). The results are shown in Charts 12 through 15. Over the long term, the global average one-year transition to default shows a one-year Gini coefficient of 84%; a three-year of 78%; a five-year of 75%; and a seven-year of 72%.

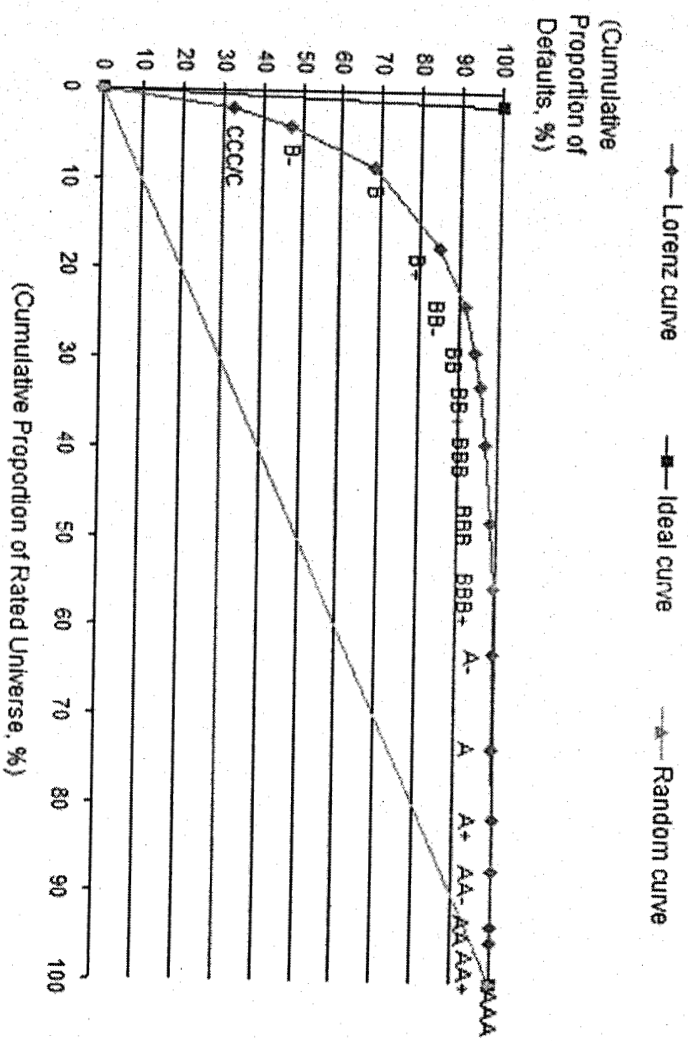
Table 16 Gini Coefficients By Region (1981-2005)				
Region	-Time Horizon (Year)-			
	1	2	3	4
Global	84	78	75	72
U.S.	82	77	74	71
Europe	94	89	84	74

Sources: Standard &amp; Poor's Global Fixed Income Research and Standard &amp; Poor's CreditPro® 7.02.

The variation in Gini coefficients by region is displayed in Table 16. As expected, the Gini coefficients decline over time because longer time horizons allow greater opportunity for credit degradation among higher-rated entities. In the one-year global Lorenz curve, for example, 95.4% of defaults occurred in the speculative grade category ('BB+' or lower), while ratings of 'BB+' or lower constituted only 32.9% of all corporate ratings (see Chart 12). Looking at the seven-year Lorenz curve, speculative-grade issuers constituted 85.0% of defaulters and only 29.5% of the entire sample. If the rank ordering of ratings had little predictive value, the cumulative share of defaulting corporate entities and the cumulative share of all entities would be nearly the same.

Chart 12

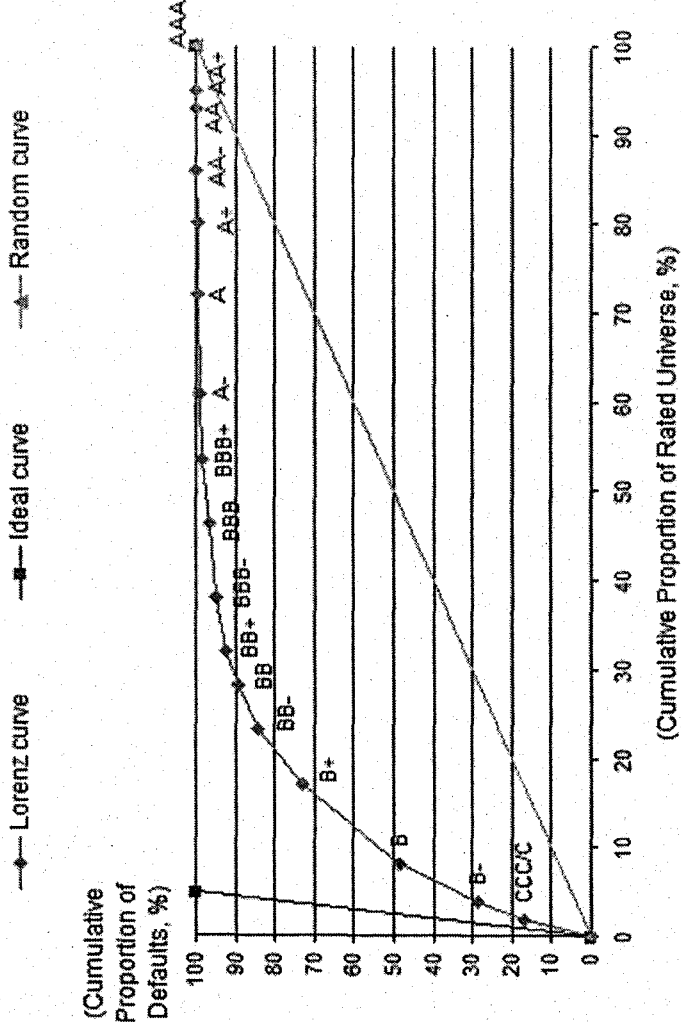
One-Year Relative Corporate Rating Performance (1981-2005)



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.



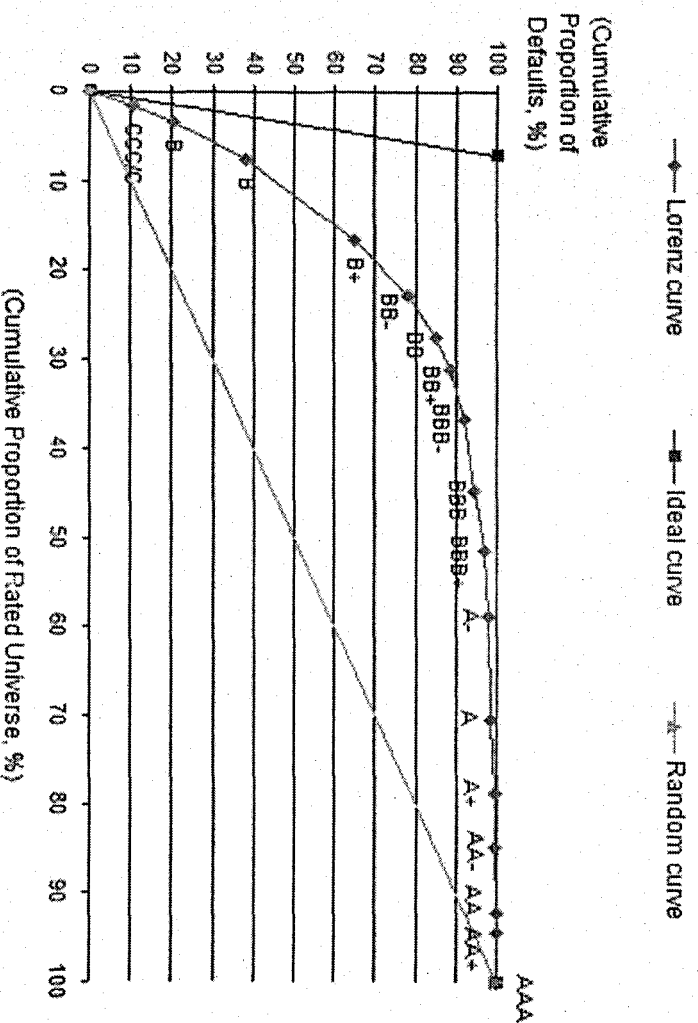
Chart 13  
**Three-Year Relative Corporate Rating Performance  
(1981-2005)**



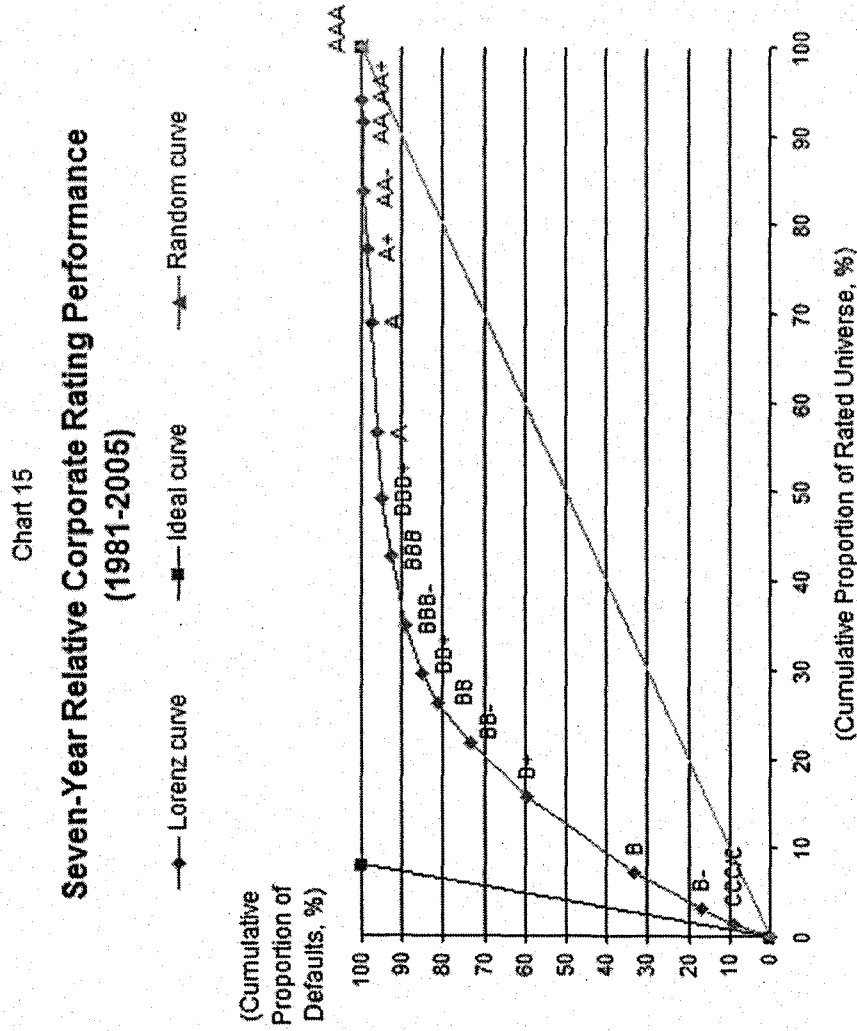
Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Chart 14

# Five-Year Relative Corporate Rating Performance (1981-2005)

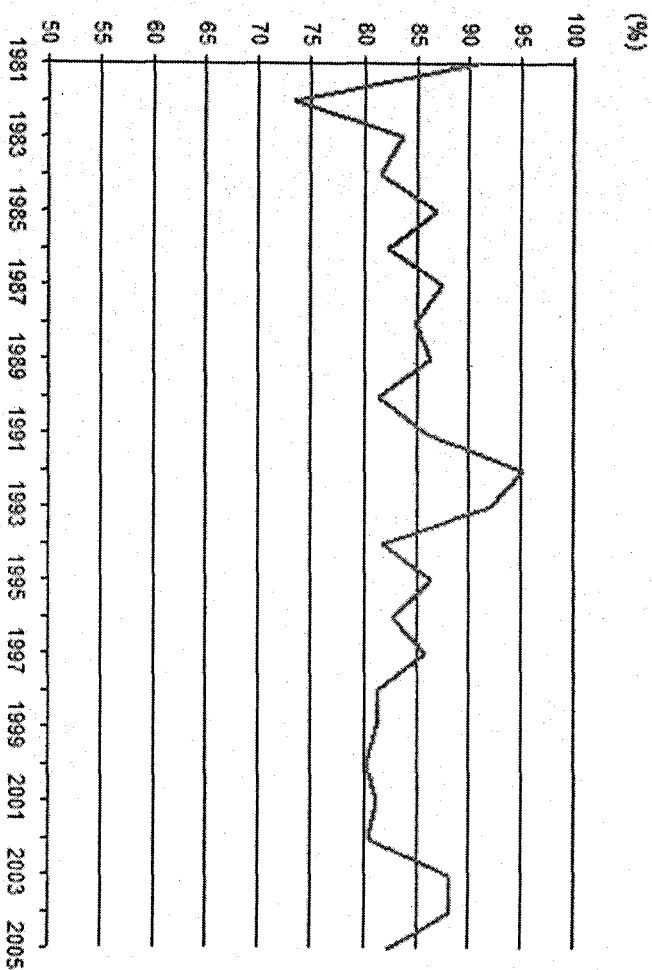


Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.



Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Chart 16

**Global One-Year Gini Coefficients**

Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

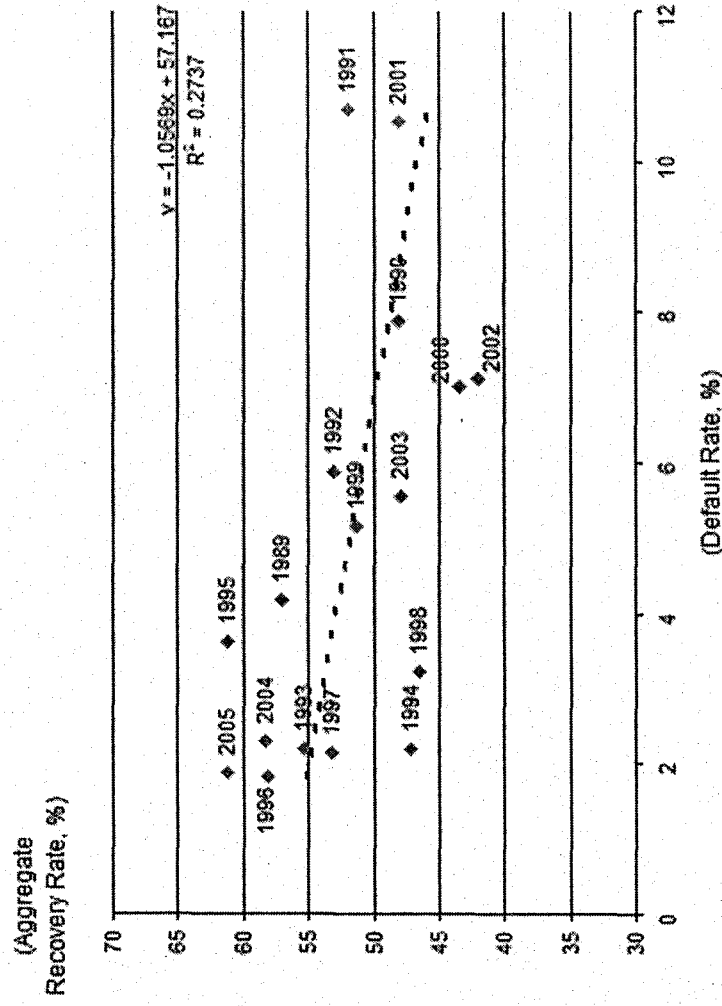
The pattern of one-year Gini coefficients appears to be broadly cyclical (see Chart 16). Trends in the one-year Gini ratio emerge during periods of both extremes in default pressure, which is a reflection of the natural relationship between the two concepts. In periods of high defaults, there tends to be greater variation with respect to how the defaults are distributed across the ratings spectrum, which reduces the Gini. That is, when default pressure is high, the economic conditions are such that there is an increased likelihood of companies suffering a more rapid deterioration of credit quality.

Standard & Poor's issuer credit ratings are current opinions of an obligor's overall financial capacity (its creditworthiness) to pay its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they become due. It does not apply to any specific financial obligation, as it does not take into account the nature and provisions of the obligation, its standing in bankruptcy or liquidation, statutory preferences, or the legality and enforceability of the obligation. Even though Standard & Poor's ratings are not explicitly a comment on recovery prospects, an investigation of the relationship between the two concepts offers some valuable insight. Recovery in this case is defined as ultimate recovery rates following emergence from three types of default: bankruptcy filings, distressed exchanges, and defaults cured outside the grace period (30 days in the U.S.). This measure is believed to be a more accurate measure of value than the post-default trading price, which is subject to greater liquidity-related price impairment and less certainty about recovery prospects. In addition, the relationship between default rates and recovery rates broadly corresponds with expectations, and has been ably documented in academic literature. One interpretation of the inverse relationship between default rates and recovery rates is offered by Altman, Resti, and Sironi

(2003), who suggest that economic conditions that cause defaults to rise may cause recovery rates to decline. Data for the U.S. indicate that speculative-grade default rates and recovery rates are inversely correlated (see Chart 17). In other words, recovery rates tend to be low in years characterized by high defaults and vice versa.

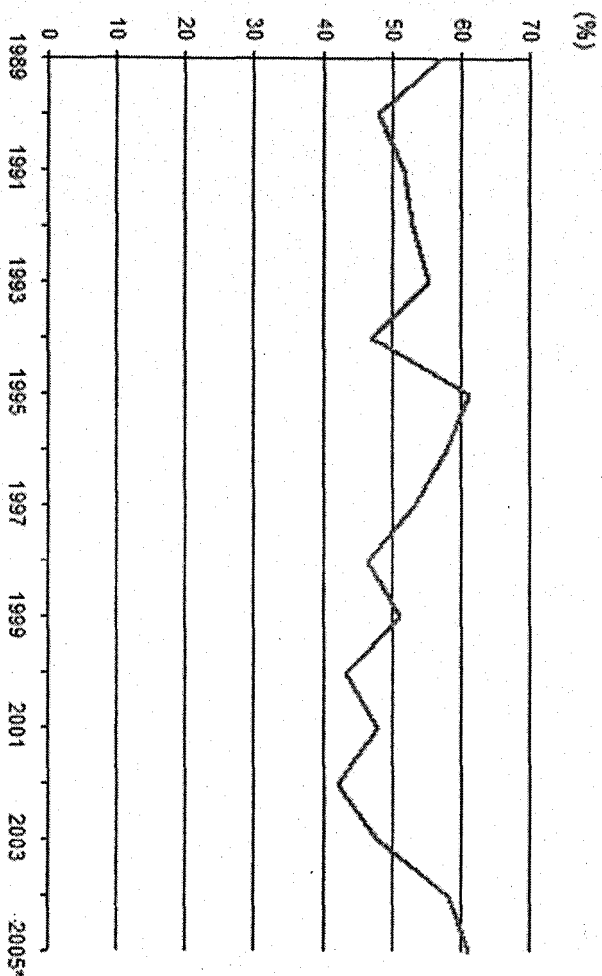
Chart 17

### U.S. Speculative-Grade Default Rate Versus Overall Discounted Recovery Rate



Recovery rate for 2005 includes data through the first half of 2005. Sources: Standard & Poor's Risk Solutions LossStats® Database and Standard & Poor's Global Fixed Income Research.

Chart 18  
**Overall Discounted Recovery Of Total Pre-petition  
 Bank And Bond Debt**

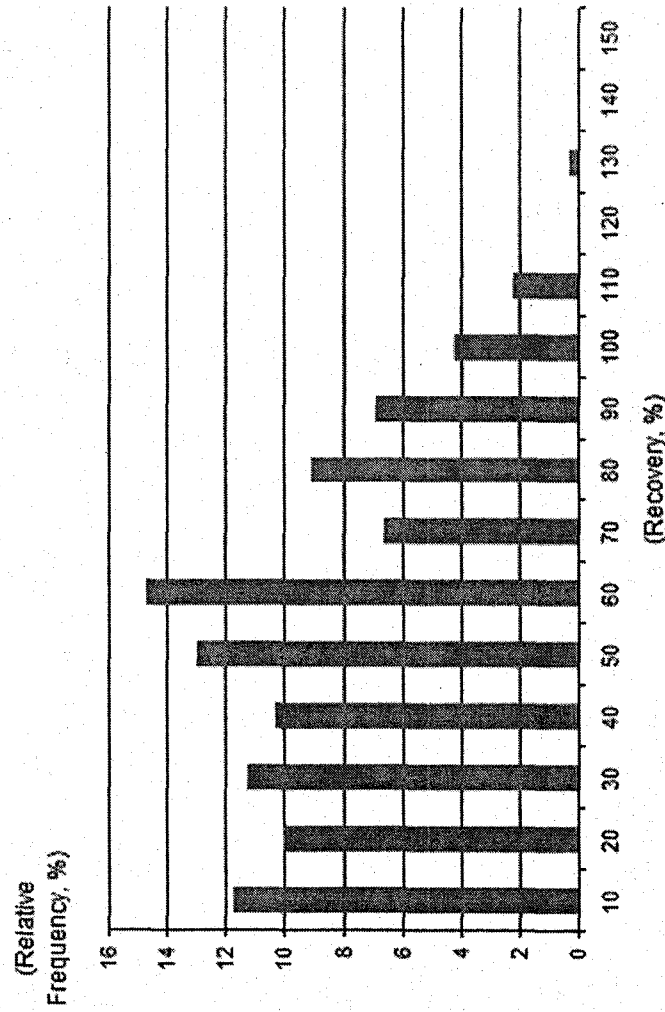


\*Data through the first half of 2005. Sources: Standard & Poor's Risk Solutions LossStats® Database and Standard & Poor's Global Fixed Income Research.

In the present climate of low default rates, compressed spreads, and relatively easy access to capital, overall recovery rates are as high as they have been over the past 10 years (see Chart 18). In order to manage expectations for future recovery, it may be helpful to understand how recovery rates are distributed conditioned on ratings before default. Indeed, as we might have suspected, issuers that were rated investment grade one year prior to default have greater likelihood of high recovery than do those issuers that were rated speculative grade one year prior to their default. The median recovery for investment grade issuers over the period from 1987 to mid-2005 was 68%, while the median recovery for speculative grade issuers over the same period was 45% (see Charts 19 and 20). Still, investors need to weigh the implications of the securities' relative position in the capital structure since recovery experience varies greatly by level of seniority (see Table 17). Variations in ultimate recovery are also visible by industry, with the utility sector posting the highest recovery rates in the period since 2000 (see Chart 21).

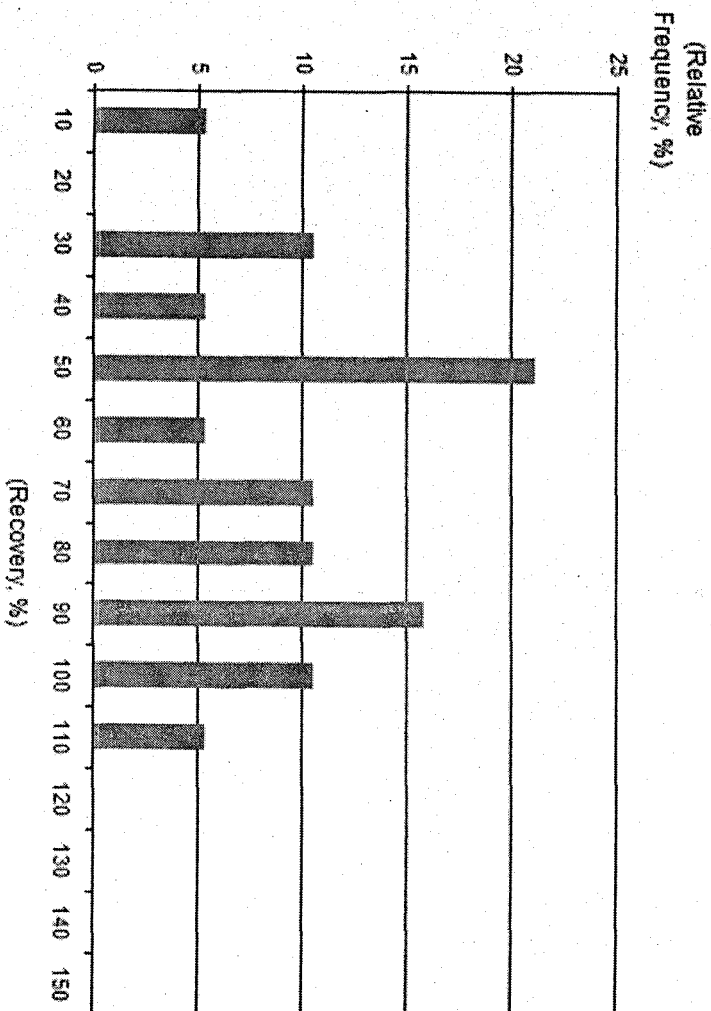
Chart 19

# Recovery Rate Histogram For Speculative-Grade Issuers



Recovery bins are greater than or equal to the lower bound and strictly less than the upperbound; each bin is labeled with its upperbound. This histogram is based on the recovery experience of 409 issuers that defaulted from 1987 to mid-2005 and had speculative-grade ratings one year prior to default. Sources: Standard & Poor's Risk Solutions LossStats® Database and Standard & Poor's Global Fixed Income Research.

# Chart 20 Recovery Rate Histogram For Investment-Grade Issuers



Recovery bins are greater than or equal to the lower bound and strictly less than the upperbound; each bin is labeled with its upperbound. This histogram is based on the recovery experience of 19 issuers that defaulted from 1987 to mid-2005 and had investment-grade ratings one year prior to default. Sources: Standard & Poor's Risk Solutions LossStats® Database and Standard & Poor's Global Fixed Income Research.

Table 17 Ultimate Recovery Rates By Asset Class (%)

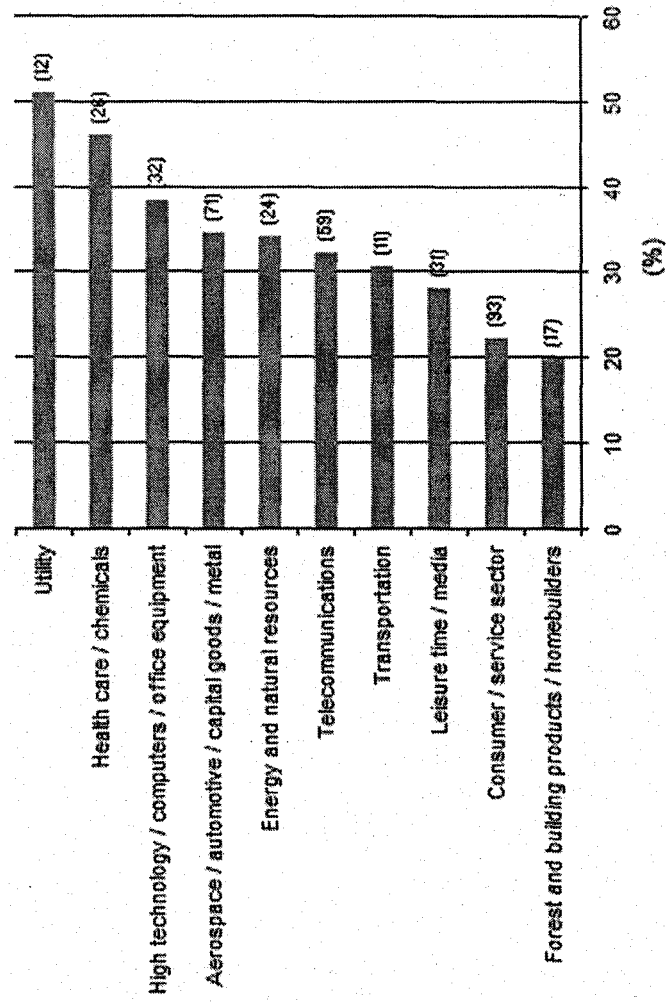
Ultimate Recovery Rates			
	Recovery	Standard Deviation	Observations
Bank debt	77.5	30.9	1,204
Senior secured bonds	62.0	33.3	301
Senior unsecured bonds	42.6	34.8	769
Senior subordinated bonds	30.3	33.3	469



Subordinated bonds	29.2	34.2	394
Junior subordinated bonds	19.1	30.6	49
Recoveries are discounted at each instrument's pre-default interest rate. Source: Standard & Poor's Risk Solutions LossStats® Database.			

Chart 21

## Recovery Rates Since 2000



Recovery rates are calculated by taking the dollar-weighted average discounted recovery for entities that emerged from default from 2000 to mid-2005. Numbers in parentheses are the number of emergencies making up the aggregate recovery rate. Sources: Standard & Poor's Risk Solutions LossStats® Database and Standard & Poor's Global Fixed Income Research.

## Appendix I: Default Methodology And Definitions

This long-term corporate default and rating transition study uses the CreditPro® 7.02 database of long-term local currency issuer credit ratings. An issuer credit rating reflects Standard & Poor's opinion of a company's overall capacity to pay its obligations (that is, its fundamental creditworthiness). This opinion focuses on the obligor's ability and willingness to meet its financial commitments on a timely basis, and it generally indicates the likelihood of default regarding all financial obligations of the firm. It is not necessary for a company to have rated debt

in order to be assigned an issuer credit rating.

Although the rating on a company's very senior forms of secured debt, particularly ones with strong covenants, may occasionally be rated higher than the issuer credit rating on the company, specific issues are typically rated as high or lower than these ratings, depending on their relative priority within the company's debt structure. If they are speculative grade, issuer credit ratings are generally two notches higher than subordinated debt ratings. Otherwise, they are generally one notch higher. Therefore, though a 'BB+' issuer credit rating is paired with a 'BB-' subordinated debt rating, a 'AA' issuer credit rating corresponds to a 'AA-' subordinated rating.

Standard & Poor's ongoing enhancement of the CreditPro database used to generate this study may lead to outcomes that differ to some degree from those reported in previous studies. However, this poses no continuity problem because each study reports statistics back to Dec. 31, 1980. Therefore, each annual default study is self-contained and effectively supersedes all previous versions.

### Issuers included in this study

The study analyzed the rating histories of 11,605 companies that were rated by Standard & Poor's as of Dec. 31, 1980, or that were first rated between that date and Dec. 31, 2005. These companies include industrials, utilities, financial institutions, and insurance companies around the world with long-term local currency ratings. The analysis excludes public information (pi) ratings and ratings based on the guarantee of another company. Structured finance vehicles, public-sector issuers, and sovereign issuers are the subject of separate default and transition studies and are also excluded from this study. Appendix III in this study offers comparisons and key distinctions in rating transitions and defaults among corporate and structured finance asset classes.

Subsidiaries whose debt is fully guaranteed by a parent or whose default risk is considered identical to that of their parents were excluded. The latter are companies whose obligations are not legally guaranteed by a parent but whose operating or financing activities are so inextricably entwined with those of the parent that it would be impossible to imagine the default of one and not the other. At times, however, some of these subsidiaries might not yet have been covered by a parent's guarantee, or the relationship that combines the default risk of parent and child might have come to an end, or might not have begun. Such subsidiaries were included for the period during which they carried a distinct and separate risk of default.

### Definition of default

A default is recorded on the first occurrence of a payment default on any financial obligation, rated or unrated, other than a financial obligation subject to a bona fide commercial dispute; an exception occurs when an interest payment missed on the due date is made within the grace period. Preferred stock is not considered a financial obligation; thus, a missed preferred stock dividend is not normally equated with default. Distressed exchanges, on the other hand, are considered defaults whenever the debt holders are coerced into accepting substitute instruments with lower coupons, longer maturities, or any other diminished financial terms.

Issue ratings are usually lowered to 'D' following a company's default on the corresponding obligation. In addition, 'SD' is used whenever Standard & Poor's believes that an obligor that has selectively defaulted on a specific issue or class of obligations will continue to meet its payment obligations on other issues or classes of obligations in a timely matter. 'R' indicates that an obligor is under regulatory supervision owing to its financial condition. This does not necessarily indicate a default event, but the regulator may have the power to favor one class of obligations over others or pay some obligations and not others. 'D', 'SD', and 'R' issuer ratings are deemed defaults for purposes of this study. A default is assumed to take place on the earliest of: the date Standard & Poor's revised the ratings to 'D', 'SD', or 'R'; the date a debt payment was missed; the date a distressed exchange offer was announced; or the date the debtor filed or was forced into bankruptcy.

### Calculations

**Static pool methodology.** Standard & Poor's conducts its default studies on the basis of groupings called static pools. Static pools are formed by grouping issuers by rating category at the beginning of each year covered by the study. Each static pool is followed from that point forward. All companies included in the study are assigned to one or more static pools. When an issuer defaults, that default is assigned back to all of

the static pools to which the issuer belonged.

Standard & Poor's uses the static pool methodology to avoid certain pitfalls in estimating default rates, to ensure that default rates account for rating migration, and to allow for default rates to be calculated across multi-period time horizons. Some methods for calculating default and rating transition rates might charge defaults against only the initial rating on the issuer—ignoring more recent rating changes that supply more current information. Other methods may calculate default rates using only the most recent year's default and rating data—this method may yield comparatively low default rates during periods of high rating activity, as they ignore prior years' default activity.

The pools are static in the sense that their membership remains constant over time. Each static pool can be interpreted as a buy and hold portfolio. Because errors, if any, are corrected by every new update, and because the criteria for inclusion or exclusion of companies in the default study are subject to minor revisions as time goes by, it is not possible to compare static pools across different studies. Therefore, every new update revises results back to the same starting date of Dec. 31, 1980, so as to avoid continuity problems. Table 18 lays out the summary of annual rating changes for each static pool beginning with 1981 and ending in 2005.

Entities that have had ratings withdrawn—that is, revised to N.R.—are surveilled with the aim of capturing a potential default. These companies, as well as those that have defaulted, are excluded from subsequent static pools.

Table 18 Summary of Annual Rating Changes* (%)								
Year	Issuers as of Jan. 1	Upgrades	Downgrades¶	Defaults	Withdrawn Ratings	Changed Ratings	Unchanged Ratings	Downgrade/Upgrade Ratio
1981	1,392	9.84	13.15	0.14	2.01	25.14	74.86	1.34
1982	1,440	5.83	12.71	1.18	5.28	25.00	75.00	2.18
1983	1,464	7.10	11.75	0.75	5.19	24.80	75.20	1.65
1984	1,552	11.08	9.99	0.90	3.03	25.00	75.00	0.90
1985	1,636	7.82	13.69	1.10	4.03	26.65	73.35	1.75
1986	1,870	7.17	15.94	1.71	6.84	31.66	68.34	2.22
1987	2,021	7.08	11.78	0.94	9.30	29.09	70.91	1.66
1988	2,109	8.87	11.76	1.42	8.20	30.25	69.75	1.33
1989	2,153	9.48	10.92	1.67	7.99	30.05	69.95	1.15
1990	2,141	6.12	15.18	2.71	6.54	30.55	69.45	2.48
1991	2,086	6.04	14.00	3.26	3.50	26.80	73.20	2.32
1992	2,186	9.24	11.62	1.37	4.16	26.40	73.60	1.26
1993	2,385	8.30	9.18	0.55	8.55	26.58	73.42	1.11
1994	2,633	6.84	9.38	0.61	4.71	21.53	78.47	1.37
1995	2,976	8.77	9.21	1.01	4.50	23.49	76.51	1.05
1996	3,233	9.22	7.24	0.49	7.08	24.03	75.97	0.79
1997	3,568	8.72	7.76	0.62	8.52	25.62	74.38	0.89
1998	4,052	7.13	11.45	1.31	8.22	28.11	71.89	1.61
1999	4,464	5.40	11.18	2.15	8.92	27.64	72.36	2.07
2000	4,617	6.71	11.74	2.36	6.58	27.40	72.60	1.75
2001	4,735	5.55	15.31	3.78	7.16	31.81	68.19	2.76

2002	4.776	5.13	18.55	3.60	6.51	33.79	66.21	3.62
2003	4.837	6.37	13.98	1.92	7.40	29.67	70.33	2.19
2004	5.072	8.46	7.22	0.73	7.18	23.58	76.42	0.85
2005	5.416	12.26	9.05	0.55	8.33	30.19	69.81	0.74
Weighted average		7.68	11.64	1.61	6.83	27.76	72.24	1.51

\*This table compares the net change in ratings from the first to the last day of each year. All intermediate ratings are disregarded. †Excludes downgrades to 'D', shown separately in the default column. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

For instance, the 1981 static pool consists of all companies rated as of 12:01 a.m. Jan. 1, 1981. Adding those companies first rated in 1981 to the surviving members of the 1981 static pool forms the 1982 static pool. All rating changes that took place are reflected in the newly formed 1982 static pool. This same method was used to form static pools for 1983 through 2005. From Jan. 1, 1981 to Dec. 31, 2005, a total of 10,213 first-time rated organizations were added to form new static pools (see Table 19), while 1,470 defaulting companies and 4,497 companies classified as N.R. were excluded from them.

Consider the following example: An issuer is originally rated 'B' in mid-1986 and is downgraded to 'B' in 1988. This is followed by a rating withdrawal (N.R.) in 1990, and a default ('D') in 1993. This hypothetical company would be included in the 1987 and 1988 pools with the 'B' rating, which it was rated at the beginning of those years; likewise, it would be included in the 1989 and 1990 pools with the 'B' rating. It would not be part of the 1986 pool because it was not rated as of the first day of that year, and it would not be included in any pool after the last day of 1990 because the rating had been withdrawn by then. Yet each of the four pools in which this company was included, 1987 to 1990, would record its 1993 default at the appropriate time horizon.

Table 19 Rating Classification Of New Issuers\*

--First Rating--

Year	AAA	AA	A	BBB	BB	B	CCC/C	Total	% Investment Grade	% Speculative Grade
1981	5	9	19	11	13	21	1	79	55.70	44.30
1982	17	20	31	16	14	18	1	117	71.79	28.21
1983	28	30	28	26	27	29	5	173	64.74	35.26
1984	10	17	30	16	29	35	2	139	52.52	47.48
1985	27	60	66	31	43	80	2	309	59.55	40.45
1986	28	19	40	26	53	125	10	301	37.54	62.46
1987	18	33	36	26	56	110	10	289	39.10	60.90
1988	22	41	33	32	31	69	10	238	53.78	46.22
1989	8	38	36	17	31	55	5	190	52.11	47.89
1990	19	36	32	15	11	14	8	135	75.56	24.44
1991	28	75	68	27	20	5	8	231	85.71	14.29
1992	15	52	59	55	59	53	5	298	60.74	39.26
1993	12	40	75	70	95	138	3	433	45.50	54.50
1994	22	37	131	82	72	115	3	462	58.87	41.13
1995	8	33	85	110	68	90	4	398	59.30	40.70
1996	11	43	101	133	127	134	2	551	52.27	47.73

1997	7	32	90	190	165	290	1	775	41.16	58.84
1998	5	52	101	132	185	287	7	769	37.71	62.29
1999	8	36	81	137	167	185	9	623	42.05	57.95
2000	6	29	91	127	100	141	13	507	49.90	50.10
2001	10	44	107	174	121	88	14	558	60.04	39.96
2002	4	20	71	126	165	144	19	549	40.26	59.74
2003	1	22	90	185	154	181	31	664	44.88	55.12
2004	8	20	101	144	140	281	33	727	37.55	62.45
2005	2	26	78	105	139	334	14	698	30.23	69.77
Total	329	864	1,680	2,013	2,085	3,022	220	10,213	47.84	52.16

\*Includes issuers that are assigned a new rating after default as well as those companies that are rated for the first time. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Ratings are withdrawn when an entity's entire debt is paid off or when the program or programs rated are terminated and the relevant debt extinguished. They may also occur as a result of mergers and acquisitions. Others are withdrawn because of a lack of cooperation, particularly when a company is experiencing financial difficulties and refuses to provide all the information needed to continue surveillance on the ratings.

**Default rate calculation.** Annual default rates were calculated for each static pool: first in units, and later as percentages with respect to the number of issuers in each rating category. Finally, these percentages were combined to obtain cumulative default rates for the 25 years covered by the study (see Table 22).

**Issuer-weighted default rates.** Averages that appear in this study are calculated based on the number of issuers rather than the dollar amounts affected by defaults or rating changes. Although dollar amounts provide information about the portion of the market that is affected by defaults or rating changes, issuer-weighted averages are a more useful measure of the statistical performance of ratings.

Many practitioners utilize statistics from this default study and CreditPro® to estimate probability of default and probability of rating transition. It is important to note that Standard & Poor's ratings do not imply a specific probability of default; however, Standard & Poor's historical default rates are frequently used to estimate these characteristics. When estimating probability of default, issuer-weighted statistics have less variance than dollar-weighted statistics, and are therefore preferable.

To illustrate this point, assume that it is known that two issuers each have a 50% probability of default. (Again, Standard & Poor's credit ratings do not imply a specific probability of default.) Assume that one issuer has \$10 of principal outstanding while the other has \$90 of principal outstanding. If we estimate default probability using the issuer-weighted methodology, we have a 50% chance of estimating a 50% default probability (one of the two issuers defaults), a 25% chance of estimating a 0% default probability (neither defaults), and a 25% chance of estimating a 100% default probability (they both default). Therefore, the standard deviation of the issuer-weighted estimator is 12.5%. If we estimate default probability using the dollar-weighted methodology, we have a 25% chance, each, of estimating 0% (neither defaults), 10% (the \$10 issuer defaults), 90% (the \$90 issuer defaults), and 100% (both default). The standard deviation of the dollar-weighted estimator is 20.5%. This issuer-weighted estimator (12.5% standard deviation) is clearly preferable to the dollar-weighted estimator (20.5% standard deviation).

**Cumulative average default rate calculation.** Cumulative default rates that average the experience of all static pools were derived by calculating marginal default rates, conditional on survival (survivors being nondefaulters) for each possible time horizon and for each static pool, weight averaging the conditional marginal default rates, and accumulating the average conditional marginal default rates (see Tables 12, 13, 14, 15,

and 22). Conditional default rates are calculated by dividing the number of issuers in a static pool that default at a specific time horizon by the number of issuers that survived (did not default) to that point in time. Weights are based on the number of issuers in each static pool. Cumulative default rates are one minus the product of the proportion of survivors (nondefaulters).

For instance, the weighted average first-year default rate for 'B' rated companies for all 25 pools was 5.38%, meaning that an average of 94.62% survived one year. Similarly, the second- and third-year conditional marginal averages were 6.78% for the first 24 pools (93.22% of those companies that did not default in the first year survived the second year) and 6.05% for the first 23 pools (93.95% of those companies that did not default by the second year survived the third year), respectively. Multiplying 94.62% by 93.22% results in an 88.20% survival rate to the end of the second year, or a two-year cumulative average default rate of 11.80%. Multiplying 88.20% by 93.95% results in an 82.86% survival rate to the end of the third year, or a three-year cumulative average default rate of 17.14%.

**N.R.-removed default rates.** A slightly different method is used to obtain N.R.-removed default rates. These are obtained by omitting those issuers that had ratings withdrawn. The N.R.-removal replicates the default rate that a buy-and-hold portfolio would experience if the portfolio were reallocated among the non-N.R. members of the portfolio each time the rating on a company is withdrawn. The numerators and denominators of the default rates decrease gradually as companies merge, leave the public fixed-income markets, or request the ratings on them be withdrawn. These rates are, in general, greater than those of the conventional default rate calculation, but the overall behavior of the default rates is quite similar. That is, the higher the rating, the lower the default likelihood.

The N.R.-removed default rate calculation may unduly inflate default rates as shown by the following example. Suppose that there were 10 issuers in a static pool, nine of which became N.R. over a 10-year time span for benign reasons such as mergers or retiring of debt. If, in the 10th year, the one company that was still rated were to default, the N.R.-adjusted default rate would be 100% for the 10-year time horizon. In order for the conventional default rate to reach 100%, all nine of the N.R. issuers would need to default after the ratings on them were withdrawn. Although the N.R.-removed default rate likely overstates the risk of default, it is included in this study because some investors use it as a conservative estimate of average default rates.

**Time sample.** This update limits the reporting of default rates to the 15-year time horizon; however, the data was gathered for 25 years and all calculations are based on the rating experience of that period. The maturities of most obligations are much shorter than 15 years. In addition, average default statistics become less reliable at longer time horizons as the sample size becomes smaller and the cyclical nature of default rates increases its effect on averages.

Default patterns share broad similarities across all static pools, suggesting that Standard & Poor's rating standards have been consistent over time. Adverse business conditions tend to coincide with default upswings for all pools. Speculative-grade issuers have been hit the hardest by these upswings, but investment-grade default rates also increase in stressful periods.

### Transition analysis

Transition rates compare issuer ratings at the beginning of a time period with ratings at the end of the period. To compute one-year rating transition rates by rating category, the rating on each entity at the end of a particular year was compared with the rating at the beginning of the same year. An issuer that remained rated for more than one year was counted as many times as the number of years it was rated. For instance, an issuer continually rated from the middle of 1984 to the middle of 1991 would appear in the six consecutive one-year transition matrices from 1985 to 1990. All 1981 static pool members still rated on Dec. 31, 2005, had 25 one-year transitions, while companies first rated between Jan. 1, 2005, and Dec. 31, 2005 had only one. Table 20 displays the summary of one-year transitions within the investment-grade and speculative-grade rating categories.

Each one-year transition matrix displays all rating movements between letter categories from the beginning of the year through year-end. For each rating listed in the matrix's left-most column, there are nine ratios listed in the rows, corresponding to the ratings from 'AAA' to 'D,' plus an entry for N.R. (see Tables 21, 23, and 24). For instance, the first panel of Table 23, which corresponds to the 1981 static pool, shows that out of all 'A' rated companies at the beginning of that year, 88.03% were rated the same at year end, while 4.46% had been upgraded to 'AA.'

6.49% had been downgraded to 'BBB,' 0.20% had been downgraded to 'BB,' and so on.

Table 20 Summary Of One-Year Rating Transitions						
Year	Jan. 1 Investment Grade (Count)	Investment Grade (%)	Speculative Grade* (%)	Defaulted† (%)	Rating Withdrawn (%)	
1981	1,070	97.38	1.40	0.00	0.00	1.21
1982	1,099	93.63	3.00	0.18		3.18
1983	1,122	94.21	2.05	0.09		3.65
1984	1,181	95.17	2.29	0.17		2.37
1985	1,216	93.09	3.54	0.00		3.37
1986	1,337	89.90	3.96	0.15		5.98
1987	1,334	90.25	3.00	0.00		6.75
1988	1,349	91.85	2.74	0.00		5.41
1989	1,400	93.21	2.64	0.14		4.00
1990	1,447	94.75	2.00	0.14		3.11
1991	1,496	96.39	1.67	0.20		1.74
1992	1,661	96.21	1.20	0.00		2.59
1993	1,823	92.27	1.54	0.00		6.20
1994	1,916	95.62	0.84	0.05		3.50
1995	2,144	95.71	1.07	0.05		3.17
1996	2,336	94.26	0.60	0.00		5.14
1997	2,551	91.85	1.22	0.08		6.86
1998	2,718	90.10	2.28	0.15		7.47
1999	2,790	90.82	1.51	0.14		7.53
2000	2,835	92.45	1.80	0.18		5.57
2001	2,929	91.40	2.59	0.20		5.80
2002	3,049	90.03	4.20	0.46		5.31
2003	2,998	92.46	2.47	0.10		4.97
2004	3,117	94.32	0.96	0.00		4.72
2005	3,264	92.98	1.65	0.03		5.33
Weighted average		92.92	2.01	0.11		4.96
Speculative-Grade Rating Distribution at Year-End						
Year	Jan. 1 Speculative Grade (Count)	Investment Grades (%)	Speculative Grade (%)	Defaulted (%)	Rating Withdrawn (%)	
1981	322	4.66	90.06	0.62		4.66
1982	341	2.64	80.94	4.40		12.02
1983	342	3.22	83.63	2.92		10.23
1984	371	4.85	86.79	3.23		5.12
1985	420	3.81	85.95	4.29		5.95

1986		533	3.00	82.36	5.63	9.01
1987		687	3.49	79.48	2.77	14.26
1988		760	3.68	79.21	3.95	13.16
1989		753	5.18	74.90	4.52	15.41
1990		694	3.17	75.07	8.07	13.69
1991		590	2.88	78.14	11.02	7.97
1992		525	6.29	78.86	5.71	9.14
1993		562	4.98	76.51	2.31	16.19
1994		717	3.91	86.05	2.09	7.95
1995		832	3.73	84.86	3.49	7.93
1996		897	4.68	81.38	1.78	12.15
1997		1,016	4.33	81.10	1.97	12.60
1998		1,334	3.07	83.51	3.67	9.75
1999		1,674	1.49	81.78	5.50	11.23
2000		1,782	2.02	83.95	5.84	8.19
2001		1,806	1.44	79.62	9.58	9.36
2002		1,726	1.91	80.36	9.15	8.57
2003		1,837	1.52	82.31	4.90	11.27
2004		1,955	2.25	84.76	1.89	11.10
2005		2,151	3.07	82.75	1.35	12.83
Weighted average			1.43	40.14	2.28	5.22

\* Fallen angels that survived to Jan. 1 of the year after they were downgraded. † Investment-grade defaulters. ‡ Rising stars. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

Table 21 Average One-Year Transition Rates By Rating Modifier, 1981 - 2005 (%)

From/To	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	D	N.R.
AAA	88.20	4.24	2.76	0.67	0.17	0.20	0.12	0.03	0.06	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	3.49
AA+	2.21	77.79	10.97	3.21	0.60	0.74	0.20	0.07	0.13	0.07	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	3.95
AA	0.56	1.11	81.86	7.76	2.65	1.35	0.32	0.45	0.15	0.04	0.02	0.02	0.00	0.00	0.02	0.04	0.00	0.00	3.59
AA-	0.05	0.23	3.37	77.95	9.75	2.91	0.73	0.33	0.21	0.09	0.05	0.00	0.00	0.07	0.12	0.02	0.00	0.02	4.10
A+	0.00	0.03	0.60	3.87	79.08	8.25	2.69	0.65	0.32	0.09	0.07	0.12	0.02	0.09	0.05	0.02	0.02	0.05	3.99
A	0.06	0.08	0.40	0.61	4.84	77.86	6.32	3.09	1.11	0.34	0.16	0.18	0.13	0.13	0.03	0.01	0.01	0.04	4.62
A-	0.07	0.02	0.09	0.23	0.69	6.50	74.63	8.45	2.66	0.69	0.19	0.23	0.14	0.11	0.02	0.02	0.07	0.04	5.16
BBB+	0.02	0.04	0.07	0.09	0.29	1.25	6.84	72.88	8.50	2.42	0.51	0.49	0.18	0.36	0.20	0.02	0.07	0.20	5.57
BBB	0.02	0.02	0.09	0.05	0.21	0.56	1.39	6.71	74.64	5.59	1.76	0.95	0.40	0.32	0.20	0.03	0.08	0.28	6.68
BBB-	0.02	0.00	0.02	0.11	0.08	0.29	0.46	1.62	8.24	70.79	5.71	2.70	1.05	0.65	0.34	0.25	0.42	0.36	6.89
BB+	0.14	0.03	0.00	0.03	0.07	0.21	0.17	0.66	2.69	10.62	63.55	6.24	3.21	1.38	0.76	0.17	0.62	0.59	8.86
BB	0.00	0.00	0.05	0.00	0.00	0.13	0.11	0.24	1.03	2.67	7.22	65.41	7.30	3.15	1.51	0.50	0.85	0.87	8.94



BB-	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.10	0.18	0.35	0.57	2.20	7.51	64.41	8.25	2.77	1.05	1.11	1.62	9.81
B+		0.00	0.01	0.00	0.06	0.00	0.04	0.12	0.07	0.07	0.15	0.38	1.62	5.74	66.97	6.38	2.38	2.21	2.86	10.92
B	0.00	0.00	0.00	0.03	0.00	0.00	0.12	0.12	0.03	0.18	0.03	0.37	0.55	1.95	8.33	57.20	5.68	5.34	7.78	12.27
B-		0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.13	0.13	0.25	0.32	0.32	0.82	3.42	7.41	51.77	10.39	11.22	13.62
CCC/C	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.21	0.14	0.14	0.14	0.14	0.28	0.83	1.52	2.56	6.84	47.06	27.02	13.06

N.R.—Not rated. Source: Standard & Poor's Global Fixed Income Research; Standard & Poor's CreditPro® 7.02.

**Practical application of transition rates.** Rating transition rates are useful to investors and credit professionals for whom rating stability is important. For instance, investors restricted by law or inclination to invest in top-grade bonds would want to assess the likelihood that Standard & Poor's analysts will continue to assign top ratings to their investments. Conversely, investors buying high-yield bonds in hopes of profiting from a rating upgrade would be able to gauge that expectation realistically.

The credit community might also use rating transition information, in part, to determine maturity exposure limits or to measure credit risk in the context of the value-at-risk models. Assuming that the rating transition rates are stable and follow a first-order Markov process, cumulative default rates could be projected for any number of years into the future. Rating transition matrices could also be constructed to produce stressed default rates. Such matrices are often used in the area of credit risk measurement. In addition, multiyear transition matrices are valuable tools that can be used to forecast future rating distributions and may be better suited for certain applications than are one-year transition matrices.

N.R.-removed transition rates. The difference between Tables 9 and 11 is that the latter is based on pools that have been gradually pared down by dropping those obligors whose ratings have been withdrawn (set to 'N.R.'). The number of withdrawn ratings grows particularly large in the case of speculative-grade ratings categories after just a few years. Little is known about 'N.R.' obligors except that there is no public record of a default. Indeed, default might be unlikely for those obligors whose debt has been extinguished.

**Multiyear transitions.** Multiyear transitions were also calculated for periods of two up to 20 years. In this case, the rating at the beginning of the multiyear period was compared with the rating at the end. For example, three-year transition matrices were the result of comparing ratings at the beginning of the years 1981 to 2003 with the ratings at the end of the years 1983 to 2005. Otherwise, the methodology was identical to that used for single-year transitions.

Average transition matrices were calculated on the basis of the multiyear matrices just described. These average matrices are a true summary whose ratios represent the historical incidence of the ratings listed on the first column, changing to the ones listed on the top row over the course of the multiyear period (see Table 24).

**Comparing transition rates with default rates.** Rating transition rates may be compared with the marginal and cumulative default rates described in the previous section. For example, note that the one-year default rate column of Table 12 is equivalent to column 'D' of the average one-year transition matrix found in Tables 9 and 24. However, the two-year default rate column of Table 10 is not the same as column 'D' of the average two-year transition matrix found in Table 24. This difference results from the different static pools used to calculate transition to default and cumulative average default rates. Cumulative average default rates are the summary of all static pools from 1981 through 2005 while the number of pools used in the average transition rate is limited by the transition's time horizon

[illegible]

Year	Number of issuers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1981		1,392	0.14	1.36	2.08	2.87	3.52	4.89	5.32	6.18	6.75	7.76	9.41	9.91	10.42	10.63
1982		1,440	1.18	1.88	2.71	3.40	4.79	5.14	5.97	6.46	7.50	9.31	9.79	10.35	10.56	10.56
1983		1,464	0.75	1.57	2.39	3.96	4.37	5.46	5.94	6.97	8.95	9.49	10.04	10.25	10.25	10.31
1984		1,552	0.90	1.93	3.74	4.19	5.28	5.99	7.09	8.76	9.34	9.92	9.92	10.12	10.12	10.24
1985		1,636	1.10	3.00	3.55	4.95	5.81	7.03	8.86	9.41	9.90	9.90	10.21	10.33	10.39	10.70
1986		1,870	1.71	2.30	3.64	4.49	5.83	7.70	8.34	8.88	8.98	9.25	9.36	9.57	9.73	10.00
1987		2,021	0.94	2.42	3.81	5.59	8.11	9.10	9.85	10.04	10.39	10.54	10.74	10.89	11.18	11.68
1988		2,109	1.42	2.99	5.12	8.16	9.15	9.91	10.15	10.62	10.76	11.05	11.28	11.62	12.33	13.32
1989		2,153	1.67	4.23	7.71	8.78	9.57	9.89	10.31	10.45	10.73	11.15	11.47	12.12	13.14	14.03
1990		2,141	2.71	6.12	7.38	8.13	8.45	8.92	9.01	9.39	9.90	10.28	11.02	12.05	13.03	13.55
1991		2,086	3.26	4.60	5.08	5.42	5.94	6.04	6.38	6.86	7.24	7.86	8.92	9.97	10.50	10.79
1992		2,186	1.37	1.83	2.15	2.74	2.88	3.20	3.66	3.98	4.62	5.63	6.68	7.14	7.27	7.41
1993		2,385	0.55	1.01	1.89	2.10	2.47	2.94	3.35	4.07	5.16	6.25	6.71	6.83	7.00	
1994		2,633	0.61	1.71	2.09	2.54	3.04	3.91	4.86	6.15	7.29	7.82	7.98	8.13		
1995		2,976	1.01	1.48	1.95	2.55	3.49	4.40	6.15	7.46	8.06	8.27	8.47			
1996		3,233	0.49	1.05	1.82	2.94	3.84	5.51	6.99	7.67	7.92	8.13				
1997		3,567	0.62	1.60	2.89	4.18	6.08	7.79	8.69	8.94	9.17					
1998		4,052	1.31	3.26	5.08	7.75	9.95	11.18	11.60	11.92						
1999		4,464	2.15	4.53	7.91	10.82	12.30	12.79	13.15							
2000		4,617	2.36	6.00	9.18	10.87	11.52	11.98								
2001		4,735	3.78	7.35	9.33	9.97	10.50									
2002		4,775	3.60	5.65	6.37	6.83										
2003		4,835	1.92	2.67	3.14											
2004		5,072	0.73	1.24												
2005		5,415	0.55													
<b>Summary statistics</b>																
Marginal average		1.61	1.63	1.49	1.30	1.09	0.94	0.79	0.67	0.62	0.58	0.52	0.44	0.44	0.40	0.42
Cumulative average		1.61	3.21	4.66	5.90	6.92	7.80	8.52	9.14	9.70	10.22	10.69	11.08	11.47	11.83	12.20
Standard deviation		1.00	1.83	2.45	2.85	3.05	2.93	2.65	2.20	1.82	1.62	1.50	1.62	1.84	1.85	1.71
<b>Rating: investment grade</b>																
<b>--Time Horizon (Year)--</b>																
Year	Number of issuers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1981		1,070	0.00	0.37	0.37	0.47	0.65	1.03	1.31	2.15	2.34	3.08	4.11	4.39	4.58	4.77
1982		1,099	0.18	0.27	0.36	0.55	1.00	1.27	2.09	2.27	3.09	4.19	4.46	4.73	4.91	4.91
1983		1,122	0.09	0.36	0.45	0.89	1.07	1.69	1.78	2.58	3.65	4.01	4.28	4.46	4.46	4.46
1984		1,181	0.17	0.25	0.59	0.76	1.27	1.44	2.12	3.05	3.39	3.64	3.64	3.81	3.81	3.90

1985	1,216	0.00	0.16	0.25	0.90	1.07	1.81	2.80	3.13	3.37	3.37	3.62	3.62	3.78	3.87	4.03
1986	1,337	0.15	0.15	0.60	0.75	1.27	2.17	2.54	2.69	2.69	2.92	2.92	3.07	3.22	3.37	3.66
1987	1,334	0.00	0.15	0.37	0.82	1.72	2.10	2.25	2.32	2.47	2.47	2.62	2.77	2.92	3.07	3.97
1988	1,349	0.00	0.22	0.37	0.96	1.33	1.48	1.56	1.70	1.70	1.85	1.93	2.08	2.22	2.97	3.71
1989	1,400	0.14	0.29	0.57	1.00	1.14	1.21	1.36	1.36	1.36	1.43	1.64	1.79	2.64	3.29	3.64
1990	1,447	0.14	0.41	0.62	0.76	0.83	0.97	0.97	0.97	1.11	1.38	1.66	2.42	2.97	3.32	3.32
1991	1,496	0.20	0.20	0.27	0.33	0.47	0.47	0.47	0.60	0.94	1.20	1.94	2.47	2.81	2.81	2.87
1992	1,661	0.00	0.00	0.06	0.18	0.18	0.18	0.30	0.54	0.72	1.26	1.75	2.05	2.05	2.17	
1993	1,823	0.00	0.05	0.16	0.16	0.22	0.44	0.77	1.04	1.59	2.19	2.47	2.47	2.58		
1994	1,916	0.05	0.16	0.16	0.26	0.42	0.84	1.04	1.62	2.19	2.51	2.51	2.56			
1995	2,144	0.05	0.05	0.09	0.23	0.70	0.89	1.54	2.10	2.38	2.38	2.43				
1996	2,336	0.00	0.04	0.13	0.51	0.73	1.41	1.97	2.23	2.27	2.31					
1997	2,551	0.08	0.16	0.47	0.71	1.29	2.04	2.39	2.43	2.47						
1998	2,718	0.15	0.40	0.59	1.14	2.13	2.54	2.61	2.72							
1999	2,790	0.14	0.29	0.68	1.65	2.08	2.15	2.26								
2000	2,835	0.18	0.49	1.48	1.94	2.01	2.15									
2001	2,929	0.20	1.23	1.67	1.78	1.95										
2002	3,049	0.46	0.82	0.89	1.02											
2003	2,998	0.10	0.13	0.23												
2004	3,117	0.00	0.06													
2005	3,264	0.03														

## Summary statistics

Marginal average	0.11	0.20	0.23	0.31	0.34	0.33	0.30	0.29	0.27	0.29	0.26	0.22	0.23	0.22	0.27
Cumulative average	0.11	0.31	0.54	0.85	1.18	1.51	1.81	2.10	2.37	2.65	2.91	3.12	3.34	3.55	3.81
Standard deviation	0.11	0.27	0.40	0.49	0.60	0.67	0.74	0.80	0.88	0.96	0.99	0.96	0.90	0.81	0.60

## Rating: speculative grade

-Time Horizon (Year)-																
Year	Number of Issuers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1981	322	0.62	4.66	7.76	10.87	13.04	17.70	18.63	19.57	21.43	23.29	27.02	28.26	29.81	29.81	30.12
1982	341	4.40	7.04	10.26	12.61	17.01	17.60	18.48	19.94	21.70	25.81	26.98	28.45	28.45	28.74	28.74
1983	342	2.92	5.56	8.77	14.04	15.20	17.84	19.59	21.35	26.32	27.49	28.95	28.95	29.24	29.24	29.53
1984	371	3.23	7.28	13.75	15.09	18.06	20.49	22.91	26.95	28.30	29.92	29.92	30.19	30.19	30.46	30.46
1985	420	4.29	11.19	13.10	16.67	19.52	22.14	26.43	27.62	28.81	28.81	29.29	29.29	29.29	29.29	30.00
1986	533	5.63	7.69	11.26	13.88	17.26	21.58	22.89	24.39	24.77	25.14	25.52	25.89	26.08	26.64	27.39
1987	687	2.77	6.84	10.48	14.85	20.52	22.71	24.60	25.04	25.76	26.20	26.49	26.64	27.22	28.38	29.84
1988	760	3.95	7.89	13.55	20.92	23.03	24.87	25.39	26.45	26.84	27.37	27.89	28.55	30.26	31.71	33.03
1989	753	4.52	11.55	20.98	23.24	25.23	26.03	26.96	27.36	28.15	29.22	29.75	31.34	32.67	34.00	34.66

1990	694	8.07	18.01	21.47	23.49	24.35	25.50	25.79	26.95	28.24	28.82	30.55	32.13	34.01	34.87	35.16
1991	590	11.02	15.76	17.29	18.31	19.83	20.17	21.36	22.71	23.22	24.75	26.61	28.98	30.00	30.51	30.85
1992	525	5.71	7.62	8.76	10.86	11.43	12.76	14.29	14.86	16.95	19.43	22.29	23.24	23.81	24.00	
1993	562	2.31	4.09	7.47	3.36	9.79	11.03	11.74	13.88	16.73	19.40	20.46	21.00	21.35		
1994	717	2.09	5.66	7.25	8.65	10.04	12.13	15.06	18.27	20.92	22.04	22.59	23.01			
1995	832	3.49	5.17	6.73	8.53	10.70	13.46	18.03	21.27	22.72	23.44	24.04				
1996	897	1.78	3.68	6.24	9.25	11.93	16.16	20.07	21.85	22.63	23.30					
1997	1,016	1.97	5.22	8.96	12.89	18.11	22.24	24.51	25.30	25.98						
1998	1,334	3.67	9.07	14.24	21.21	25.86	28.79	29.91	30.66							
1999	1,674	5.50	11.59	19.95	26.11	29.33	30.53	31.30								
2000	1,782	5.84	14.76	21.44	25.08	26.66	27.61									
2001	1,806	9.58	17.28	21.76	23.26	24.36										
2002	1,726	9.15	14.19	16.05	17.09											
2003	1,837	4.90	6.80	7.89												
2004	1,955	1.89	3.12													
2005	2,151	1.35														

## Summary statistics

Marginal average	4.65	4.79	4.47	3.81	3.11	2.66	2.25	1.88	1.74	1.52	1.40	1.18	1.17	0.98	0.94
Cumulative average	4.65	9.22	13.28	16.59	19.18	21.33	23.11	24.55	25.86	26.99	28.01	28.86	29.69	30.38	31.04
Standard deviation	2.69	4.43	5.36	5.78	6.02	5.70	5.25	4.56	3.76	3.30	3.06	3.25	3.40	2.94	2.42

Rating: 'AAA'

## -Time Horizon (Year)-

Year	Number of Issuers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1981	87	0.00	0.00	0.00	0.00	0.00	0.00	1.15	1.15	2.30	2.30	2.30	2.30	2.30	2.30	2.30
1982	86	0.00	0.00	0.00	0.00	0.00	1.16	1.16	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33
1983	98	0.00	0.00	0.00	0.00	1.02	1.02	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
1984	111	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	113	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1987	132	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
1988	146	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	1.37
1989	156	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	1.28	1.28
1990	154	0.00	0.00	0.00	0.00	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
1991	167	0.00	0.00	0.00	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
1992	176	0.00	0.00	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
1993	176	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1994	175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



2000	551	0.00	0.00	0.00	0.18	0.18	0.18												
2001	529	0.00	0.00	0.19	0.19	0.19													
2002	526	0.00	0.19	0.19	0.19														
2003	432	0.00	0.00	0.00															
2004	407	0.00	0.00																
2005	407	0.00																	

**Summary statistics**

Marginal average	0.01	0.03	0.05	0.10	0.10	0.11	0.12	0.10	0.09	0.10	0.09	0.10	0.11	0.10	0.06
Cumulative average	0.01	0.04	0.09	0.19	0.29	0.40	0.52	0.62	0.71	0.81	0.91	1.01	1.12	1.22	1.28
Standard deviation	0.04	0.07	0.11	0.26	0.38	0.51	0.59	0.67	0.73	0.78	0.78	0.76	0.68	0.61	0.53

**Rating: 'A'**

Year	Number of issuers	-Time Horizon (Year)-														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1981	493	0.00	0.20	0.20	0.20	0.41	1.01	1.22	1.42	1.42	2.03	3.04	3.25	3.65	3.65	4.06
1982	486	0.21	0.21	0.21	0.41	0.82	0.82	0.82	0.82	1.44	2.88	3.29	3.91	3.91	4.32	4.32
1983	464	0.00	0.00	0.22	0.43	0.43	0.43	0.43	1.08	2.37	2.80	3.45	3.45	3.88	3.88	3.88
1984	470	0.00	0.21	0.43	0.43	0.64	0.85	1.49	2.77	3.19	3.83	3.83	4.26	4.26	4.26	4.26
1985	508	0.00	0.39	0.39	0.39	0.59	1.18	2.36	2.76	3.35	3.35	3.74	3.74	3.74	3.74	3.74
1986	562	0.18	0.18	0.36	0.53	0.89	1.42	1.78	1.78	2.14	2.14	2.14	2.14	2.14	2.14	2.49
1987	515	0.00	0.00	0.19	0.58	1.55	1.94	1.94	1.94	2.14	2.14	2.14	2.14	2.14	2.14	3.11
1988	507	0.00	0.20	0.20	1.18	1.38	1.38	1.38	1.58	1.58	1.58	1.58	1.78	1.78	2.56	2.96
1989	553	0.00	0.00	0.36	0.54	0.54	0.54	0.72	0.72	0.72	0.90	0.90	1.81	1.81	2.17	2.53
1990	562	0.00	0.18	0.36	0.36	0.53	0.53	0.53	0.71	0.89	0.89	1.42	1.60	1.60	1.96	1.96
1991	568	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.35	0.53	0.70	1.06	1.41	1.94	1.94	2.11
1992	634	0.00	0.00	0.00	0.16	0.16	0.16	0.32	0.63	0.95	1.26	1.74	2.21	2.21	2.21	
1993	697	0.00	0.00	0.14	0.14	0.14	0.43	0.86	1.15	1.58	2.01	2.30	2.30	2.30		
1994	743	0.13	0.27	0.27	0.27	0.40	0.81	1.08	1.48	2.02	2.42	2.42	2.42			
1995	873	0.00	0.00	0.00	0.11	0.34	0.46	0.92	1.26	1.49	1.49	1.49				
1996	965	0.00	0.00	0.00	0.10	0.21	0.63	1.05	1.26	1.26	1.26					
1997	1,036	0.00	0.00	0.10	0.19	0.68	1.06	1.45	1.45							
1998	1,046	0.00	0.10	0.19	0.57	0.96	1.24	1.34								
1999	1,064	0.09	0.19	0.56	0.75	0.94	1.03									
2000	1,055	0.09	0.47	0.85	1.04	1.14										
2001	1,079	0.19	0.37	0.46	0.56	0.56										
2002	1,120	0.09	0.09	0.09	0.09											
2003	1,128	0.00	0.00	0.00												
2004	1,160	0.00	0.00													

<http://www.ratingsdirect.com/Apps/RD/controller/Article?id=490644&type=&outputType=print&from=Alert>

Standard deviation		0.29	0.65	0.91	1.07	1.30	1.54	1.74	1.82	1.91	1.80	1.61	1.53	1.49	1.37	1.08
<b>Rating: 'BB'</b>																
		--Time Horizon (Year)--														
Year	Number of Issuers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1981	222	0.00	4.50	6.76	9.91	13.06	18.02	18.92	20.27	22.97	24.77	28.38	29.73	31.08	31.08	31.53
1982	167	4.19	4.79	7.78	9.58	15.57	16.17	17.37	19.76	20.36	23.35	24.55	25.75	25.75	25.75	25.75
1983	173	1.16	2.89	5.20	11.56	12.72	16.18	17.92	18.50	23.70	24.86	26.01	26.01	26.01	26.01	26.59
1984	178	1.12	2.81	8.99	9.55	11.80	14.61	16.29	21.35	22.47	23.03	23.03	23.03	23.03	23.60	23.60
1985	205	1.46	6.83	7.32	9.27	12.20	14.63	20.49	21.46	21.95	21.95	22.44	22.44	22.44	22.44	22.44
1986	231	1.30	1.73	3.46	6.49	8.66	15.15	16.02	16.88	16.88	17.32	18.18	19.05	19.05	19.05	19.05
1987	271	0.37	1.85	4.43	8.12	12.92	15.13	16.61	16.61	17.71	18.45	19.19	19.19	19.56	19.93	20.30
1988	291	1.03	3.09	6.87	12.03	13.40	15.12	15.12	16.15	16.84	17.53	17.87	18.56	19.59	19.93	21.99
1989	281	0.71	4.98	11.39	13.88	15.30	15.66	16.37	17.08	17.79	18.15	18.51	19.22	20.64	22.78	23.49
1990	283	3.53	8.83	11.66	13.07	13.07	14.13	14.84	16.25	16.96	17.31	18.02	19.79	22.26	22.97	23.32
1991	239	1.67	4.18	5.02	5.02	6.69	7.53	8.37	9.21	10.04	11.30	13.39	15.90	16.32	16.74	17.15
1992	245	0.00	1.22	1.22	2.45	2.86	4.08	4.90	5.71	7.76	10.61	13.47	13.47	13.88	13.88	
1993	288	0.35	0.69	2.43	3.13	3.82	4.51	5.21	7.29	10.42	13.19	13.54	13.89	13.89		
1994	366	0.27	1.91	2.46	3.28	4.37	6.56	9.02	11.48	13.93	14.75	15.03	15.57			
1995	410	0.98	2.20	3.41	4.63	6.59	9.27	13.17	16.10	17.80	18.29	18.78				
1996	455	0.66	1.54	2.64	4.84	7.03	10.11	13.63	15.60	16.04	16.70					
1997	529	0.19	0.95	3.40	6.62	10.40	13.99	16.82	17.58	18.34						
1998	629	0.95	2.70	7.00	10.97	15.58	18.60	19.24	20.03							
1999	754	0.93	3.85	8.62	14.59	17.77	18.30	19.10								
2000	811	1.23	5.55	11.84	14.55	15.04	15.91									
2001	823	3.16	8.99	11.66	12.15	13.37										
2002	802	2.74	4.36	4.74	5.74											
2003	915	0.55	1.20	1.86												
2004	968	0.41	0.72													
2005	1,015	0.20														
<b>Summary statistics</b>																
Marginal average		1.12	2.24	2.72	2.64	2.41	2.37	1.93	1.69	1.61	1.25	1.17	0.89	0.81	0.55	0.66
Cumulative average		1.12	3.33	5.96	8.45	10.65	12.77	14.45	15.90	17.26	18.29	19.25	19.97	20.62	21.05	21.58
Standard deviation		1.12	2.36	3.39	3.89	4.32	4.51	4.63	4.64	4.59	4.46	4.67	4.80	4.90	4.55	3.90
<b>Rating: 'B'</b>																
		--Time Horizon (Year)--														
Year	Number of Issuers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15



1981		88	2.27	4.55	10.23	13.64	13.64	17.05	18.18	18.18	18.18	19.32	23.86	25.00	27.27	27.27	27.27
1982		160	3.13	8.13	11.25	14.38	16.88	17.50	18.13	18.75	21.25	26.88	28.13	30.00	30.00	30.63	30.63
1983		154	4.55	6.49	11.04	14.94	15.56	17.53	19.48	22.08	26.62	27.92	29.87	29.87	30.52	30.52	30.52
1984		177	3.39	9.04	15.82	18.08	22.03	23.73	26.55	29.94	31.64	34.46	34.46	35.03	35.03	35.03	35.03
1985		202	6.44	14.85	18.32	23.76	26.24	28.71	31.68	33.17	35.15	35.15	35.64	35.64	35.64	35.64	37.13
1986		288	8.33	11.81	16.67	18.75	23.26	26.04	27.78	29.86	30.56	30.90	30.90	31.25	32.29	32.29	33.68
1987		358	3.07	7.82	11.45	16.76	21.79	24.02	25.98	26.82	27.09	27.37	27.37	27.65	28.49	29.89	32.40
1988		415	3.86	8.67	15.90	24.34	26.75	28.92	29.88	31.08	31.33	31.57	32.29	33.01	34.94	37.11	38.07
1989		415	3.37	12.77	23.86	25.78	27.71	28.92	30.12	30.36	31.33	33.01	33.73	35.66	37.11	38.07	38.80
1990		363	8.54	21.49	24.52	26.45	28.10	29.48	29.48	30.58	32.51	33.33	35.54	37.19	38.84	39.94	40.22
1991		289	13.84	19.72	21.45	22.84	24.22	24.22	25.61	27.68	27.68	29.07	31.14	33.56	34.95	35.64	35.99
1992		229	6.99	9.17	10.92	13.97	13.97	15.72	18.34	18.78	20.52	23.14	26.20	27.95	28.82	29.26	
1993		229	2.62	5.68	10.92	11.35	13.97	15.72	16.59	18.34	20.96	24.02	25.76	26.64	27.51		
1994		327	3.06	8.87	10.70	12.84	14.37	16.51	19.57	23.85	26.61	28.13	29.05	29.36			
1995		396	4.55	6.31	8.33	10.61	12.88	15.66	20.96	24.49	25.76	26.52	27.27				
1996		417	2.88	5.76	9.59	13.43	16.55	21.82	26.14	27.82	28.78	29.50					
1997		462	3.46	8.87	13.64	17.97	24.68	29.44	31.17	32.03	32.68						
1998		677	4.58	13.29	19.35	29.10	33.83	36.78	38.40	39.14							
1999		851	7.29	15.98	27.61	34.08	37.49	39.37	40.19								
2000		888	7.55	19.82	26.91	31.53	34.23	35.36									
2001		873	11.23	20.73	26.69	29.10	30.24										
2002		754	8.09	15.78	18.97	20.29											
2003		758	4.09	6.07	7.78												
2004		849	1.53	3.42													
2005		1,010	1.58														

## Summary statistics

Marginal average	5.38	6.78	6.05	4.95	3.71	3.02	2.61	2.14	1.77	1.79	1.63	1.45	1.53	1.39	1.32
Cumulative average	5.38	11.80	17.14	21.24	24.16	26.45	28.37	29.91	31.15	32.38	33.48	34.44	35.44	36.34	37.18
Standard deviation	3.09	5.48	6.44	6.98	7.57	7.45	6.84	5.93	4.94	4.32	3.71	3.80	3.90	3.99	4.02

## Rating: 'CCC/C'

		--Time Horizon (Year)--														
Year	Number of Issuers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1981	12	0.00	8.33	8.33	8.33	8.33	16.67	16.67	16.67	16.67	25.00	25.00	25.00	25.00	25.00	25.00
1982	14	21.43	21.43	28.57	28.57	35.71	35.71	35.71	35.71	42.86	42.86	42.86	42.86	42.86	42.86	42.86
1983	15	6.67	26.67	26.67	33.33	40.00	40.00	40.00	46.67	53.33	53.33	53.33	53.33	53.33	53.33	53.33
1984	16	25.00	37.50	43.75	43.75	43.75	50.00	56.25	56.25	56.25	56.25	56.25	56.25	56.25	56.25	56.25
1985	13	15.38	23.08	23.08	23.08	30.77	38.46	38.46	38.46	38.46	38.46	38.46	38.46	38.46	38.46	38.46

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## Summary statistics

Marginal average	27.02	11.80	8.23	5.86	5.70	2.33	2.33	1.32	3.10	1.84	1.59	1.69	1.36	1.58	0.00
Cumulative average	27.02	35.63	40.93	44.39	47.56	48.78	49.98	50.64	52.17	53.05	53.79	54.57	55.19	55.90	55.90
Standard deviation	12.54	13.29	13.89	14.82	14.45	12.73	12.70	12.59	11.78	10.37	10.80	11.23	11.84	12.12	12.71

Source: Standard & Poor's Global Fixed Income Research; Standard & Poor's CreditPro® 7.02

Table 23 Static Pool One-Year Transition Matrices (%)

1987 Static Pool										
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	87	88.51	11.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	211	1.90	89.57	8.06	0.00	0.00	0.00	0.00	0.00	0.47
A	493	0.00	4.46	88.03	6.49	0.20	0.00	0.00	0.00	0.81
BBB	279	0.00	0.00	4.66	87.46	5.02	0.00	0.00	0.00	2.87
BB	222	0.00	0.00	0.90	5.41	60.36	29.73	0.45	0.00	3.15
B	88	0.00	0.00	1.14	0.00	4.55	81.82	2.27	2.27	7.95
CCC/C	12	0.00	0.00	0.00	0.00	0.00	8.33	83.33	0.00	8.33

## 1982 Static Pool

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	86	93.02	4.65	2.33	0.00	0.00	0.00	0.00	0.00	0.00
AA	230	0.43	88.70	6.52	0.43	1.30	0.00	0.00	0.00	2.61
A	486	0.00	3.70	84.16	9.26	0.62	0.00	0.00	0.21	2.06
BBB	297	0.34	0.00	2.02	81.82	8.75	0.34	0.00	0.34	6.40
BB	167	0.00	0.60	0.00	3.59	73.65	7.78	0.00	4.19	10.18
B	160	0.00	0.00	0.63	0.63	2.50	75.63	3.75	3.13	13.75
CCC/C	14	0.00	0.00	0.00	0.00	0.00	7.14	57.14	21.43	14.29

## 1983 Static Pool

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	98	79.59	17.35	1.02	0.00	0.00	0.00	0.00	0.00	2.04
AA	248	0.40	91.94	5.24	0.81	0.00	0.00	0.00	0.00	1.61
A	464	0.65	4.09	87.07	4.31	0.65	0.00	0.00	0.00	3.23
BBB	312	0.32	0.64	6.09	79.81	5.77	0.64	0.00	0.32	6.41
BB	173	0.00	0.58	1.16	3.47	72.25	11.56	0.00	1.16	9.83
B	154	0.00	0.00	0.65	0.65	3.25	78.57	0.65	4.55	11.69
CCC/C	15	0.00	0.00	0.00	0.00	0.00	20.00	73.33	6.67	0.00

## 1984 Static Pool

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	111	71.17	26.13	0.90	0.00	0.00	0.00	0.00	0.00	1.80
AA	296	1.69	91.55	4.39	1.01	0.00	0.00	0.00	0.00	1.35
A	470	0.00	2.77	90.64	3.40	0.64	0.00	0.00	0.00	2.55
BBB	304	0.00	0.33	11.51	76.32	5.92	1.97	0.00	0.66	3.29
BB	178	0.00	0.00	1.12	7.87	80.34	5.06	0.00	1.12	4.49
B	177	0.00	0.00	0.00	1.13	5.08	84.75	0.00	3.39	5.65
CCC/C	16	0.00	0.00	0.00	0.00	0.00	0.00	68.75	25.00	6.25

## 1985 Static Pool

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	94	90.43	6.38	0.00	0.00	1.06	0.00	0.00	0.00	2.13
AA	331	0.30	85.20	8.16	1.81	0.00	1.21	0.30	0.00	3.02
A	508	0.00	1.97	86.61	6.69	1.18	0.20	0.00	0.00	3.35
BBB	283	0.00	0.71	8.13	76.33	6.36	4.24	0.00	0.00	4.24
BB	205	0.00	0.00	0.98	5.37	74.63	10.24	1.46	1.46	5.85
B	202	0.00	0.00	1.49	0.00	2.48	82.67	0.50	6.44	6.44
CCC/C	13	0.00	0.00	0.00	0.00	0.00	30.77	53.85	15.38	0.00

**1986 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	113	87.61	7.08	0.00	0.00	0.00	0.00	0.00	0.00	5.31
AA	360	1.11	86.39	4.44	1.67	0.00	0.56	0.00	0.00	5.83
A	562	0.18	4.63	77.58	8.90	1.42	1.60	0.00	0.18	5.52
BBB	302	0.00	0.00	6.95	74.17	8.28	2.65	0.33	0.33	7.28
BB	231	0.00	0.00	0.00	6.49	75.32	6.06	1.30	1.30	9.52
B	288	0.00	0.00	0.00	0.35	3.82	68.40	10.42	8.33	8.68
CCC/C	14	0.00	0.00	0.00	0.00	0.00	0.00	71.43	21.43	7.14

**1987 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	132	92.42	3.03	0.00	0.76	0.00	0.00	0.00	0.00	3.79
AA	364	1.65	87.36	4.95	0.27	0.00	0.00	0.00	0.00	5.77
A	515	0.00	1.36	83.30	5.83	0.39	1.17	0.00	0.00	7.96
BBB	323	0.00	0.62	5.26	77.09	6.50	3.41	0.00	0.00	7.12
BB	271	0.00	0.00	0.37	7.01	70.85	7.75	0.00	0.37	13.65
B	358	0.00	0.00	0.84	0.00	4.75	74.58	2.51	3.07	14.25
CCC/C	58	0.00	0.00	0.00	1.72	1.72	6.90	60.34	12.07	17.24

**1988 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	146	88.36	5.48	2.05	0.00	0.68	0.00	0.00	0.00	3.42
AA	364	1.37	81.59	10.44	2.75	0.55	0.27	0.00	0.00	3.02
A	507	0.00	1.58	87.57	4.54	0.79	0.59	0.00	0.00	4.93
BBB	332	0.00	0.30	8.73	73.49	5.12	2.11	0.60	0.00	9.64
BB	291	0.00	0.00	1.03	7.22	70.79	7.56	1.72	1.03	10.65
B	415	0.00	0.24	0.00	0.24	4.58	73.25	2.89	3.86	14.94
CCC/C	54	0.00	0.00	0.00	3.70	3.70	9.26	50.00	20.37	12.96

**1989 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	156	92.31	6.41	0.00	0.00	0.00	0.00	0.00	0.00	1.28
AA	357	0.56	90.76	6.72	0.00	0.00	0.00	0.00	0.00	1.96
A	553	0.00	1.45	85.71	6.51	2.17	0.18	0.00	0.00	3.98
BBB	334	0.00	0.00	6.89	77.84	5.99	0.60	0.60	0.60	7.49
BB	281	0.00	0.00	0.71	12.46	66.55	5.34	0.71	0.71	13.52
B	415	0.00	0.24	0.00	0.00	7.23	69.64	3.86	3.37	15.66
CCC/C	57	0.00	0.00	1.75	0.00	1.75	0.00	42.11	31.58	22.81

1990 Static Pool											
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.	
AAA	154	94.81	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.65	
AA	381	0.52	88.19	10.24	0.00	0.00	0.00	0.00	0.00	1.05	
A	562	0.00	2.14	85.05	7.47	1.25	0.18	0.00	0.00	3.91	
BBB	350	0.00	0.00	4.86	83.43	5.14	0.86	0.00	0.57	5.14	
BB	283	0.00	0.00	0.00	6.36	65.02	9.89	3.18	3.53	12.01	
B	363	0.00	0.55	0.00	0.55	3.31	66.12	4.96	8.54	15.98	
CCC/C	48	0.00	0.00	0.00	0.00	2.08	4.17	56.25	31.25	6.25	
1991 Static Pool											
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.	
AAA	167	87.43	11.98	0.60	0.00	0.00	0.00	0.00	0.00	0.00	
AA	394	0.25	90.36	7.61	0.00	0.00	0.00	0.00	0.00	1.78	
A	568	0.18	0.53	91.37	6.16	0.53	0.00	0.00	0.00	1.23	
BBB	367	0.00	0.82	3.81	85.29	5.18	0.82	0.00	0.82	3.27	
BB	239	0.00	0.00	0.00	5.86	76.15	7.53	1.67	1.67	7.11	
B	289	0.00	0.35	0.00	0.35	5.54	68.17	3.46	13.84	8.30	
CCC/C	62	0.00	0.00	0.00	1.61	3.23	6.45	45.16	33.87	9.68	
1992 Static Pool											
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.	
AAA	176	88.64	9.66	0.00	0.00	0.00	0.00	0.00	0.00	1.70	
AA	458	1.09	89.08	6.33	1.09	0.00	0.00	0.00	0.00	2.40	
A	634	0.00	1.10	92.27	4.10	0.16	0.16	0.00	0.00	2.21	
BBB	393	0.00	0.25	4.58	86.77	3.82	0.76	0.00	0.00	3.82	
BB	245	0.00	0.00	0.00	11.84	73.88	4.08	2.86	0.00	7.35	
B	229	0.00	0.00	0.44	1.31	10.92	65.50	3.93	6.99	10.92	
CCC/C	51	0.00	0.00	0.00	0.00	3.92	11.76	47.06	27.45	9.80	
1993 Static Pool											
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.	
AAA	176	90.91	2.84	1.70	0.00	0.00	0.00	0.00	0.00	4.55	
AA	485	0.00	90.72	5.77	0.21	0.00	0.00	0.00	0.00	3.30	
A	697	0.29	1.00	87.80	3.59	0.00	0.00	0.00	0.00	7.32	
BBB	465	0.00	0.00	4.30	81.51	5.81	0.00	0.22	0.00	8.17	
BB	288	0.00	0.35	0.35	7.99	69.44	7.64	0.35	0.35	13.54	
B	229	0.00	0.00	0.44	0.87	13.10	64.19	1.75	2.62	17.03	
CCC/C	45	0.00	0.00	0.00	0.00	2.22	26.67	28.89	13.33	28.89	

**1994 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	175	89.14	8.57	0.57	0.00	0.00	0.00	0.00	0.00	1.71
AA	492	0.41	88.21	8.74	0.00	0.00	0.00	0.20	0.00	2.44
A	743	0.00	1.21	91.66	4.04	0.13	0.13	0.13	0.13	2.56
BBB	506	0.00	0.20	2.77	88.14	1.98	0.40	0.00	0.00	6.52
BB	366	0.00	0.00	0.00	7.38	83.33	2.73	0.00	0.27	6.28
B	327	0.00	0.00	0.00	0.31	4.89	80.73	2.75	3.06	8.26
CCC/C	24	0.00	0.00	0.00	0.00	0.00	8.33	45.83	16.67	29.17

**1995 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	181	90.06	7.73	0.00	0.00	0.00	0.00	0.00	0.00	2.21
AA	499	0.60	87.37	9.22	0.20	0.00	0.00	0.00	0.00	2.61
A	873	0.00	2.29	90.84	3.55	0.23	0.00	0.00	0.00	3.09
BBB	591	0.00	0.34	4.23	87.65	3.55	0.00	0.00	0.17	4.06
BB	410	0.00	0.00	0.49	6.10	81.22	4.88	0.00	0.98	6.34
B	396	0.00	0.00	0.25	0.51	7.32	76.01	2.02	4.55	9.34
CCC/C	26	0.00	0.00	0.00	3.85	0.00	7.69	50.00	26.92	11.54

**1996 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	175	89.71	6.29	0.00	0.00	0.00	0.00	0.00	0.00	4.00
AA	508	0.59	87.60	5.12	0.00	0.00	0.00	0.00	0.00	6.69
A	955	0.00	2.93	89.95	1.99	0.10	0.00	0.00	0.00	5.03
BBB	698	0.14	0.00	5.73	87.82	1.72	0.14	0.00	0.00	4.44
BB	455	0.00	0.00	0.44	8.13	76.48	4.62	0.44	0.66	9.23
B	417	0.00	0.00	0.24	0.48	8.15	71.70	1.92	2.88	14.63
CCC/C	25	0.00	0.00	0.00	0.00	8.00	12.00	52.00	4.00	24.00

**1997 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	173	90.17	4.62	0.00	0.00	0.00	0.00	0.00	0.00	5.20
AA	527	0.76	88.99	3.61	0.76	0.00	0.19	0.00	0.00	5.69
A	1,036	0.00	1.74	86.97	4.05	0.19	0.29	0.00	0.00	6.76
BBB	815	0.00	0.12	3.44	85.03	2.33	0.74	0.00	0.25	8.10
BB	529	0.00	0.00	0.19	7.56	75.61	4.54	0.00	0.19	11.91
B	462	0.00	0.00	0.65	0.00	6.71	73.59	2.60	3.46	12.99
CCC/C	25	0.00	0.00	0.00	0.00	0.00	16.00	52.00	12.00	20.00

1998 Static Pool											
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.	
AAA	168	88.69	6.55	0.00	0.60	0.00	0.00	0.00	0.00	4.17	
AA	533	0.38	87.24	5.07	0.00	0.00	0.00	0.00	0.00	7.32	
A	1,046	0.10	1.43	85.76	5.64	0.29	0.00	0.00	0.00	6.79	
BBB	971	0.00	0.00	2.47	82.18	5.15	0.72	0.21	0.41	8.86	
BB	629	0.32	0.16	0.16	4.93	74.09	6.36	2.23	0.95	10.81	
B	677	0.00	0.15	0.15	0.44	5.76	74.89	5.02	4.58	9.01	
CCC/C	28	0.00	0.00	3.57	0.00	0.00	17.86	32.14	42.86	3.57	
1999 Static Pool											
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.	
AAA	157	85.35	5.73	0.00	0.00	0.00	0.00	0.00	0.00	8.92	
AA	547	0.18	87.57	6.95	0.55	0.00	0.00	0.00	0.18	4.57	
A	1,064	0.00	2.26	84.40	5.73	0.09	0.09	0.00	0.09	7.33	
BBB	1,022	0.00	0.20	2.94	83.66	3.91	0.00	0.00	0.20	9.10	
BB	754	0.00	0.13	0.00	2.79	76.26	6.76	0.66	0.93	12.47	
B	851	0.00	0.00	0.12	0.24	2.59	75.68	4.11	7.29	9.99	
CCC/C	69	0.00	0.00	0.00	0.00	0.00	2.90	50.72	33.33	13.04	
2000 Static Pool											
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.	
AAA	145	86.90	3.45	1.38	0.00	0.00	0.00	0.00	0.00	8.28	
AA	551	0.73	84.39	10.89	0.18	0.00	0.00	0.00	0.00	3.81	
A	1,055	0.00	2.37	84.36	7.49	0.38	0.09	0.00	0.09	5.21	
BBB	1,084	0.00	0.28	2.49	86.16	3.51	0.46	0.28	0.37	6.46	
BB	811	0.00	0.00	0.12	3.82	79.90	6.29	1.11	1.23	7.52	
B	888	0.00	0.00	0.23	0.23	3.49	75.45	4.28	7.55	8.78	
CCC/C	83	0.00	0.00	0.00	0.00	1.20	6.02	51.81	32.53	8.43	
2001 Static Pool											
From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.	
AAA	135	88.89	5.19	0.00	0.00	0.00	0.00	0.00	0.00	5.93	
AA	529	0.19	84.50	11.15	0.00	0.00	0.00	0.00	0.00	4.16	
A	1,079	0.00	2.32	84.89	6.86	0.19	0.00	0.37	0.19	5.19	
BBB	1,186	0.00	0.08	3.12	83.47	4.38	0.59	0.93	0.34	7.08	
BB	823	0.00	0.00	0.36	2.79	73.88	9.84	2.19	3.16	7.78	
B	873	0.00	0.00	0.00	0.00	2.98	66.55	8.25	11.23	11.00	
CCC/C	110	0.00	0.00	0.00	0.00	0.00	7.27	40.00	44.55	8.18	

**2002 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	132	81.06	11.36	0.00	0.76	0.00	0.00	0.00	0.00	6.82
AA	526	0.19	74.90	16.92	2.28	0.19	0.57	0.00	0.00	4.94
A	1,120	0.00	0.54	83.13	10.54	0.80	0.18	0.09	0.09	4.64
BBB	1,271	0.00	0.08	2.12	82.06	6.36	2.20	0.55	1.02	5.90
BB	802	0.12	0.00	0.37	3.24	77.68	7.61	1.37	2.74	6.86
B	754	0.00	0.00	0.00	0.27	4.64	68.30	9.15	8.09	9.55
CCC/C	170	0.00	0.00	0.59	0.00	1.18	7.65	34.12	44.12	12.35

**2003 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	112	82.14	8.04	1.79	0.00	0.00	0.00	0.00	0.00	8.04
AA	432	0.46	83.80	10.88	0.46	0.00	0.00	0.00	0.00	4.40
A	1,128	0.00	0.62	88.48	6.56	0.18	0.00	0.00	0.00	4.17
BBB	1,326	0.00	0.00	1.43	87.33	5.13	0.30	0.00	0.23	5.58
BB	915	0.00	0.00	0.00	2.95	75.85	9.84	0.66	0.55	10.16
B	758	0.00	0.00	0.00	0.13	6.60	72.30	3.83	4.09	13.06
CCC/C	164	0.00	0.00	0.00	0.00	0.61	11.59	45.73	32.93	9.15

**2004 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	95	92.63	6.32	0.00	0.00	0.00	0.00	0.00	0.00	1.05
AA	407	0.25	90.42	3.69	0.25	0.00	0.00	0.00	0.00	5.41
A	1,160	0.00	1.12	92.33	3.10	0.09	0.00	0.00	0.00	3.36
BBB	1,455	0.00	0.07	1.99	90.10	1.86	0.14	0.00	0.00	5.84
BB	968	0.10	0.00	0.10	4.03	81.20	5.37	0.21	0.41	8.57
B	849	0.00	0.00	0.12	0.12	6.60	76.21	2.24	1.53	13.19
CCC/C	138	0.00	0.00	0.72	0.00	0.72	15.22	52.90	14.49	15.94

**2005 Static Pool**

From/To	Number of Issuers	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	98	88.78	9.18	1.02	0.00	0.00	0.00	0.00	0.00	1.02
AA	407	0.00	90.66	4.91	0.49	0.00	0.00	0.00	0.00	3.93
A	1,224	0.08	1.63	88.89	4.41	0.00	0.00	0.00	0.00	4.98
BBB	1,535	0.00	0.20	5.93	84.04	3.06	0.46	0.00	0.07	6.25
BB	1,015	0.00	0.00	0.00	5.71	76.75	6.90	0.20	0.20	10.25
B	1,010	0.00	0.00	0.10	0.59	8.51	70.59	3.76	1.58	14.85
CCC/C	126	0.00	0.00	0.00	0.79	0.79	25.40	46.83	8.73	17.46



Sources: Standard &amp; Poor's Global Fixed Income Research and Standard &amp; Poor's CreditPro® 7.02.

Table 24 Average Multi-Year Transition Matrices, 1981 - 2005 (%)

From/To	One-Year Transition Rates							
	AAA	AA	A	BBB	BB	B	CCC/C	N.R.
AAA	88.20	7.67	0.49	0.09	0.06	0.00	0.00	3.49
AA	0.58	87.16	7.63	0.58	0.06	0.11	0.02	3.85
A	0.05	1.90	87.24	5.59	0.42	0.15	0.03	4.58
BBB	0.02	0.16	3.85	84.13	4.27	0.76	0.17	6.37
BB	0.03	0.04	0.25	5.26	75.74	7.36	0.90	9.29
B	0.00	0.05	0.19	0.31	5.52	72.67	4.21	11.67
CCC/C	0.00	0.00	0.28	0.41	1.24	10.92	47.06	13.06

From/To	Two-Year Transition Rates							
	AAA	AA	A	BBB	BB	B	CCC/C	N.R.
AAA	77.84	13.34	1.53	0.18	0.12	0.03	0.00	6.97
AA	1.05	75.94	13.61	1.50	0.22	0.20	0.01	7.44
A	0.07	3.43	76.14	9.75	0.99	0.37	0.06	9.07
BBB	0.04	0.31	6.73	70.88	6.93	1.62	0.35	12.35
BB	0.04	0.07	0.55	9.11	57.08	10.77	1.48	17.48
B	0.00	0.08	0.34	0.73	9.14	52.05	4.67	20.86
CCC/C	0.00	0.00	0.38	1.06	1.74	13.40	25.44	20.82

From/To	Three-Year Transition Rates							
	AAA	AA	A	BBB	BB	B	CCC/C	N.R.
AAA	68.36	17.85	2.59	0.40	0.09	0.03	0.00	10.65
AA	1.42	66.19	18.36	2.37	0.41	0.28	0.02	10.86
A	0.10	4.56	66.84	12.42	1.61	0.66	0.11	13.47
BBB	0.04	0.49	8.66	60.30	8.37	2.44	0.51	17.78
BB	0.04	0.08	0.86	11.35	43.46	11.97	1.64	24.29
B	0.01	0.07	0.47	1.28	10.52	37.03	4.33	28.12
CCC/C	0.00	0.00	0.34	1.10	2.37	13.69	13.78	24.34

From/To	Five-Year Transition Rates							
	AAA	AA	A	BBB	BB	B	CCC/C	N.R.
AAA	53.81	22.10	4.89	1.03	0.13	0.13	0.00	17.80
AA	1.81	51.23	24.07	4.11	0.62	0.43	0.05	17.38
A	0.13	5.76	52.75	15.45	2.57	1.09	0.16	21.45
BBB	0.08	0.85	10.63	45.93	8.84	3.05	0.65	26.97
BB	0.03	0.14	1.58	12.72	26.79	10.67	1.68	34.61

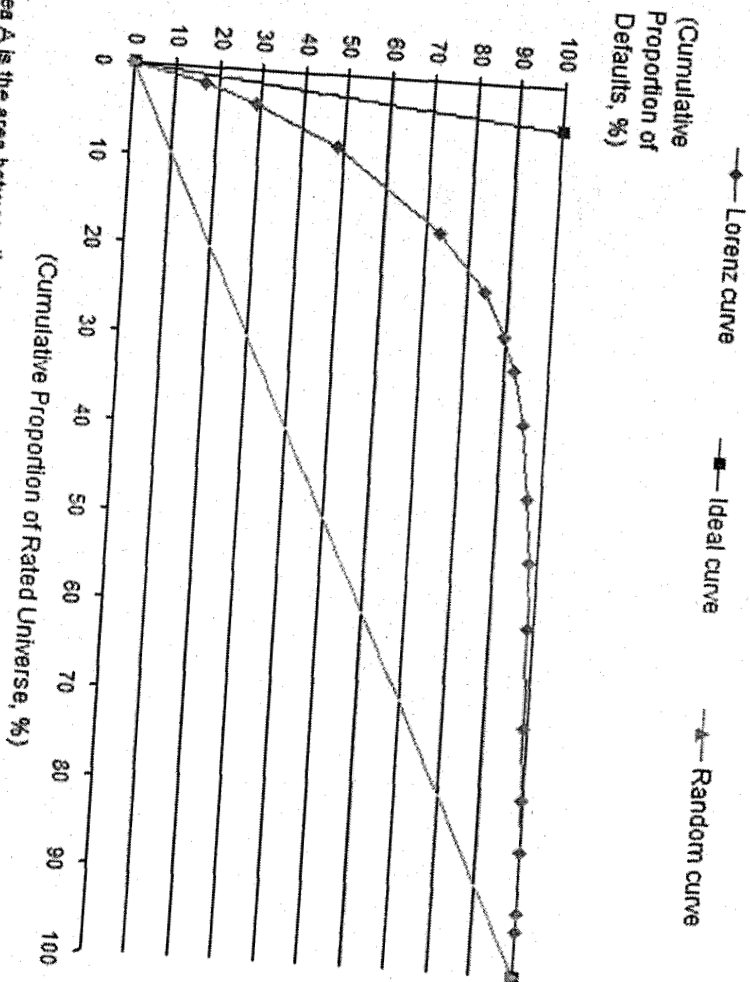
B	0.04	0.07	0.57	2.17	9.94	20.37	2.87	26.14	37.83
CCC/C	0.00	0.00	0.24	1.53	2.59	9.54	4.36	49.35	32.39
Seven-Year Transition Rates									
From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	42.94	24.04	6.79	1.94	0.22	0.07	0.07	0.26	23.67
AA	1.90	40.87	26.68	5.23	0.82	0.34	0.03	0.55	23.57
A	0.14	5.91	43.78	16.39	3.13	1.20	0.16	1.10	28.18
BBB	0.11	1.14	11.31	37.09	8.11	2.77	0.55	4.08	34.84
BB	0.00	0.14	2.04	13.11	17.37	8.38	1.03	15.07	42.85
B	0.02	0.06	0.80	2.86	8.40	12.13	1.82	28.80	45.11
CCC/C	0.00	0.00	0.46	2.13	2.74	5.64	2.13	48.93	37.96
10-Year Transition Rates									
From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	29.91	24.97	9.65	3.64	0.13	0.00	0.00	0.54	31.16
AA	1.66	29.99	27.57	7.08	1.05	0.38	0.02	0.85	31.40
A	0.24	5.65	35.72	16.40	3.36	1.21	0.06	1.89	35.46
BBB	0.07	1.43	12.24	28.55	7.04	2.10	0.23	5.43	42.91
BB	0.05	0.14	2.83	13.15	10.57	5.25	0.53	17.65	49.83
B	0.00	0.04	0.89	4.04	6.79	6.08	0.75	29.35	52.05
CCC/C	0.00	0.00	0.37	0.75	3.37	2.25	0.37	50.00	42.88
15-Year Transition Rates									
From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	17.04	22.77	14.73	2.75	0.37	0.37	0.00	0.97	41.00
AA	1.67	18.41	26.24	9.42	1.22	0.59	0.00	1.73	40.72
A	0.28	4.20	26.28	16.32	3.94	1.25	0.07	3.16	44.50
BBB	0.00	1.23	11.00	21.05	5.05	2.24	0.20	8.33	50.90
BB	0.00	0.28	3.15	9.17	5.90	2.64	0.24	22.94	55.69
B	0.00	0.00	1.03	4.16	3.54	2.61	0.69	35.72	52.25
CCC/C	0.00	0.00	1.10	1.38	3.03	1.38	0.00	55.65	37.47
20-Year Transition Rates									
From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	N.R.
AAA	7.47	15.45	19.86	4.24	0.34	0.85	0.00	1.02	50.76
AA	1.49	9.19	20.35	13.84	1.79	0.36	0.06	3.22	49.70
A	0.40	2.21	20.18	14.48	3.39	2.11	0.20	5.67	51.36
BBB	0.00	1.01	7.93	17.45	3.60	1.29	0.51	11.76	56.44
BB	0.00	0.26	1.87	5.87	3.83	2.98	0.26	28.66	56.29
B	0.00	0.00	0.47	2.62	2.71	1.31	0.28	36.58	56.03

## Appendix II: Gini Methodology

<http://www.ratingsdirect.com/Apps/RD/controller/Article?id=490644&type=&outputType=print&from=Alert>

Chart 22

### Sample Lorenz Curve



Area A is the area between the Lorenz curve and the Ideal curve. Area B is the area between the Ideal curve and the Random curve. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro® 7.02.

## Appendix III: Default And Transition Experience Of Corporates Versus Structured Finance Asset Classes

Structured Finance contact: Erkan Erturk, Ph.D., Director, New York (1) 212-438-2450; erkan\_erturk@standardandpoors.com

Table 25 Global Structured Finance 2005 Rating Transition By Region And Sector

Region/Sector	Beginning Number of Ratings	Stable (%)	Upgrade (%)	Downgrade (%)*	Near Default (%)*	Default (%)*
U.S. ABS†	3,728	93.43	4.75	1.82	0.00	0.97
U.S. CDOs	3,917	93.16	3.47	3.37	0.38	0.56
U.S. CMBS	4,353	76.29	21.36	2.34	0.00	0.51
U.S. RMBS**	17,674	91.45	7.91	0.64	0.01	0.19

<http://www.ratingsdirect.com/Apps/RD/controller/Article?id=490644&type=&outputType=print&from=Alert>

U.S. Single-Issue Synthetics	879	81.91	10.58	7.51	0.00	0.57
U.S. Corporate Bonds	2,866	71.35	9.11	12.14	N.A.	0.91
Euro. ABS <sup>¶</sup>	592	95.78	2.36	1.86	0.51	1.18
Euro. CDOs	2,552	92.71	3.41	3.88	0.00	0.00
Euro. CMBS	430	91.16	6.51	2.33	0.00	0.00
Euro. RMBS <sup>**</sup>	1,190	93.36	6.30	0.34	0.00	0.00
Euro. Single-Issue Synthetics	276	91.30	3.26	5.43	0.00	0.00
Euro. Corporate Bonds	941	68.97	8.93	11.37	N.A.	0.11
Asia (non-Japan)	51	86.27	11.76	1.96	0.00	0.00
Asia (non-Japan) Corporate Bonds	314	58.28	34.08	2.87	N.A.	0.00
Australia / New Zealand	878	95.56	3.42	1.03	0.00	0.00
Australia / New Zealand Corporate Bonds	167	76.65	6.59	9.58	N.A.	0.00
Canada	265	85.28	14.72	0.00	0.00	0.00
Canada Corporate Bonds	247	73.68	6.07	8.50	N.A.	0.40
Japan	897	89.19	8.58	2.23	0.00	0.00
Japan Corporate Bonds	347	64.84	26.22	1.73	N.A.	0.29
Latin America/Emerg. Mkt.	114	82.46	16.67	0.88	0.00	0.00
Latin America/Emerg. Mkt. Corporate Bonds	771	63.81	25.29	2.46	N.A.	0.13
Total Structured Finance	37,796	90.03	8.25	1.72	0.05	0.33
Total corporate bonds <sup>¶¶</sup>	5,416	69.81	12.26	9.05	N.A.	0.55

When ratings are withdrawn due to redemptions during the transition window, their last rating before withdrawal is used in the transition rate calculation. Rating modifiers (+ and -) are used when determining rating transitions such as upgrades and downgrades. 'AAA' ratings from the same transaction are treated as a single rating in the calculation of this table.  
<sup>¶</sup>Downgrade rate among structured finance asset classes includes near-defaults ('CC' or 'C') and defaults. Default rate includes near-defaults. Among corporates, however, only transitions to 'D' or 'SD' are recorded in the default column. <sup>¶¶</sup>ABS includes manufactured housing deals. <sup>§</sup>CDO includes cash, synthetic, and market value CDOs as well as leveraged funds. <sup>\*\*</sup>RMBS includes subprime mortgage transactions. <sup>¶¶¶</sup>Corporate bonds refer to issuer ratings of financial and nonfinancial entities. Source: Standard & Poor's

The propensity for downgrades was much higher among corporates than among structured finance securities, even though the gap in default rates was much smaller (see Table 25). Although the distinctions between these two asset classes need to be kept in mind, the broad trends established in 2005 are consistent with long-term patterns (see also Charts 25 and 26). Overall, the improving credit quality observed in 2005 was relatively significant. Table 25 shows the actual number of ratings outstanding at the beginning of this year for each sector and region and provides insight into the rating transition rates in 2005 for corporates as well as structured finance asset classes. In 2005, the following key trends were observed in the structured finance asset classes:

- Global structured securities continue to exhibit positive credit trends, reversing the significant declines in credit quality between 2001 and 2003.
- Overall, about 10% of global structured securities experienced rating transitions in 2005 compared with 10.87% in 2004.
- Globally, CMBS and RMBS sectors performed well in 2005 and accounted for the majority of raised ratings in terms of the number of upgraded securities.
- U.S. and European CMBS experienced improved credit quality, resulting in higher upgrade rates of 21.36% and 6.51%, respectively.
- Sectors such as aircraft, manufactured housing, early vintage CDO of ABS, and single-issue synthetic sectors accounted for most downgrades.
- The upgrade rate in 2005 was 8.25% versus 7.84% in 2004. In other words, 8.25% of outstanding ratings were raised during this time

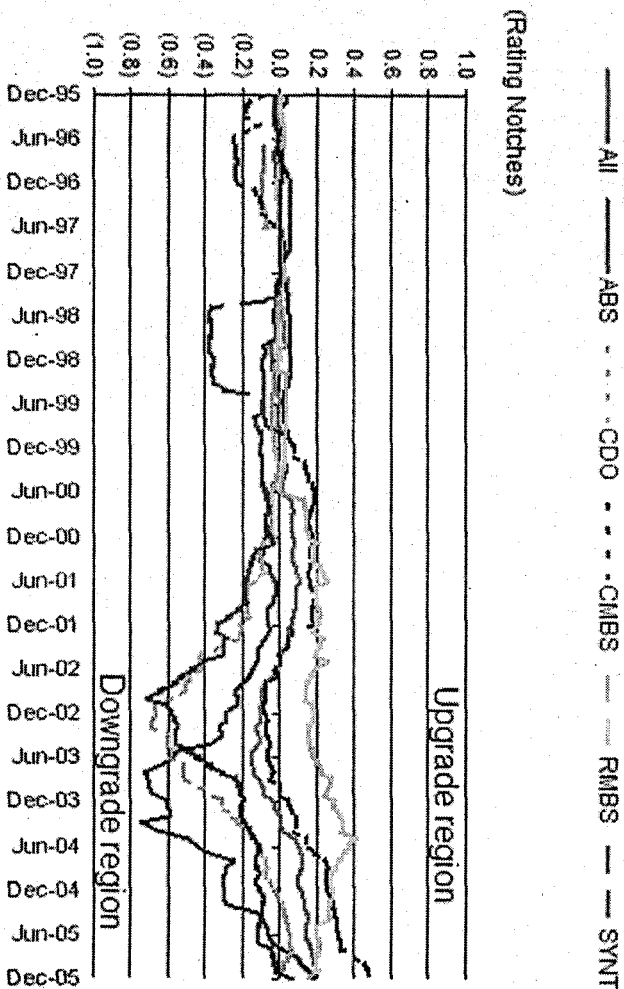
period, suggesting a slight improvement over 2004.

- The downgrade rate was 1.72% for global structured finance during 2005, down from a rate of 3.03% during 2004.
- Defaults and near defaults in 2005 came primarily from securities that were rated 'B' or lower at the beginning of 2005.

Chart 23

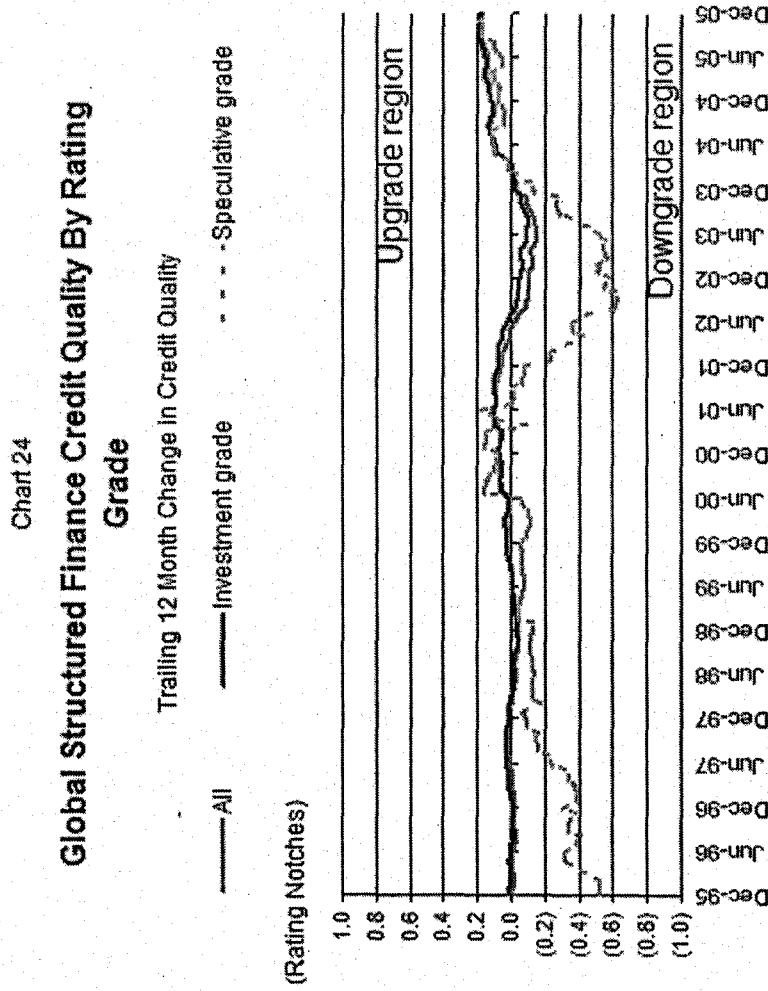
### Global Structured Finance Credit Quality By Sector

Trailing 12-Month Change in Credit Quality



Sources: Standard & Poor's Global Structured Finance and Standard & Poor's Global Fixed Income Research.

Overall, the global structured securities performed well in 2005, exceeding the credit experience observed by their corporate counterparts last year as well as their own prior performance during the past several years. The upgrade rate for global structured securities was about 4.8x the downgrade rate in 2005. Within structured finance asset classes globally, CMBS ratings have seen the most positive trend, with credit quality at the highest level in the 12 months ended Dec. 2005 (see Chart 23). This performance benefited from healthy real estate fundamentals (all property sectors posted rent gains), defecance, and relatively low delinquency rates. The RMBS sector continued to be the most stable, benefiting from substantial upgrades. However, the credit quality of CDOs and, to a greater extent, ABS has improved in 2004 and 2005, following significant deterioration between 2001 and 2003. Credit quality of U.S. asset-backed securities (ABS) performed better than its historical average transition rates, primarily because of the strong credit behavior of credit card, auto, and student loan ABS ratings. The one exception was seasoned manufactured housing transactions. About 9% of all outstanding manufactured housing securities experienced downgrades, and they accounted for the majority of downgraded securities in the U.S. ABS market during the year.



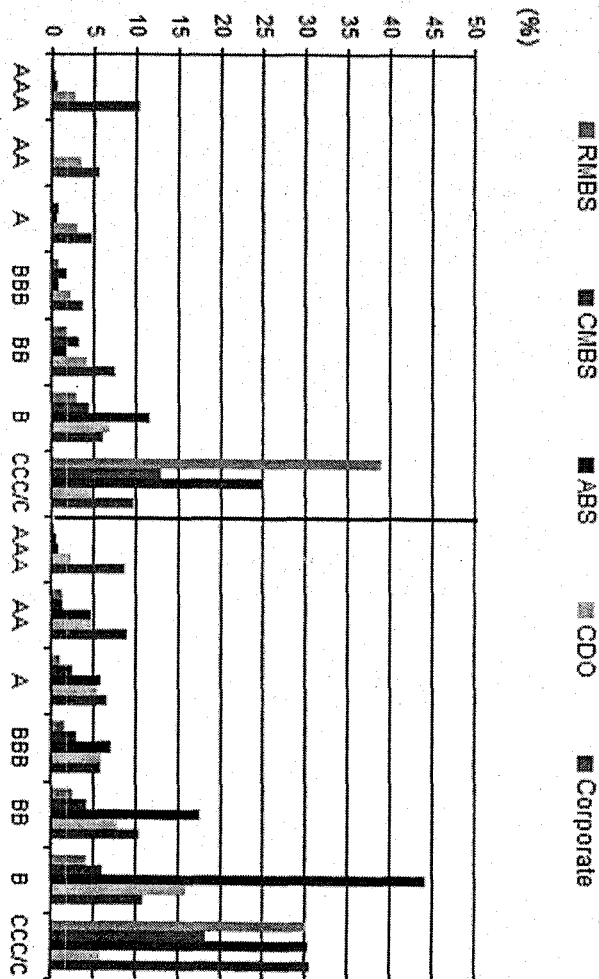
Sources: Standard & Poor's Global Structured Finance and Standard & Poor's Global Fixed Income Research.

Across sectors, both investment- and speculative-grade securities showed improvements in credit quality (see Chart 24). Volatility in the speculative-grade segment declined significantly in 2005 compared with recent years, though it still accounted for a greater chunk of the overall volatility.

Chart 25.

# **U.S. Downgrade Rates Across Corporate And Structured Finance Asset Classes**

2005 Versus Long-Term Average



The left side of the chart is 2005 downgrade rates. The right side of the chart is the long-term average one-year downgrade rates. Downgrade rates include the transition to default. Sources: Standard & Poor's Global Structured Finance and Standard & Poor's CreditPro@ 7.02.

Viewed across rating categories (see Chart 25), the following key observations emerge from the U.S. market:

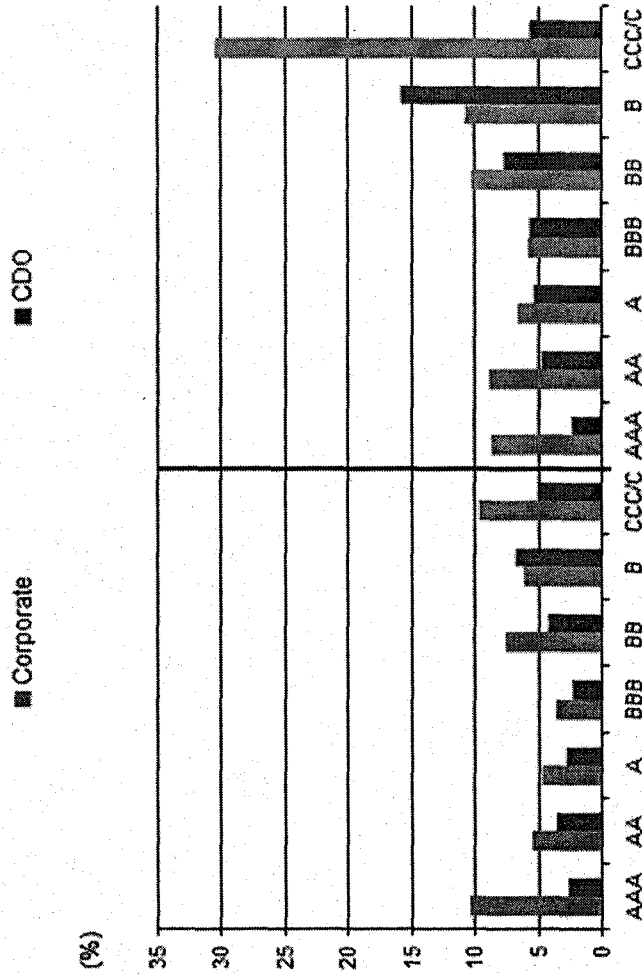
- Structured securities rated 'A' or higher, on average, tend to experience lower downgrade rates than their corporate counterparts.
- Within 'BBB' or below, ratings in the ABS sector on average show higher downgrade rates vis-à-vis corporates as well as other structured finance sectors. This is attributable largely to the poor credit performance of certain subsectors such as manufactured housing, franchise loans, and aircraft ABS in recent years.
- In 2005, structured finance securities performed better than corporates in terms of downgrade rates in every rating category higher than 'B'.
- The relatively high downgrade rates in the 'AAA' rated segment of the corporate sector in 2005 is attributable to a small universe of ratings (a small base creates room for greater volatility). Many of these actions were related to U.S.-based insurance companies that were downgraded from 'AAA' during the course of the year.



Chart 26

# Global CDO And Corporate Downgrade Rates

2005 Versus Long-Term Average



The left side of the chart is 2005 downgrade rates. The right side of the chart is the long-term average one-year downgrade rates. Downgrade rates include the transition to default. Sources: Standard & Poor's Global Structured Finance and Standard & Poor's CreditPro 7.02.

Globally, one-year downgrade rates among corporates in 2005 were higher than those seen in the CDO market, in keeping with long-term trends (see Chart 26). This was true across most major rating categories (all except 'B' rated entities) as well as many geographies (though in 2005, improvements were largely attributable to the U.S. and Australia/New Zealand). The gap between global CDOs and corporates in the 'CCC/C' rating category is likely overstated by the time horizon under consideration. Several 'CC' rated CDOs that have not faced a credit event in the one-year horizon will eventually move to default when actual principal loss events occur over a more extended period of time.

CDO rating behavior tends to be more closely correlated with corporates because CDOs backed by corporate credits are a significant part of the CDO universe. Performance among CDOs improved in 2005 relative to historical averages, owing to strong credit behavior among most structured finance sectors in 2005, even though early vintage CDOs of ABS transactions and synthetic corporate investment-grade CDOs experienced rating deterioration in 2005. The latter category was largely affected by high-profile downgrades in the auto sector as well as bankruptcy filings in the U.S. airline sector and by Delphi Automotive.

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ryan\_schneck@standardandpoors.com

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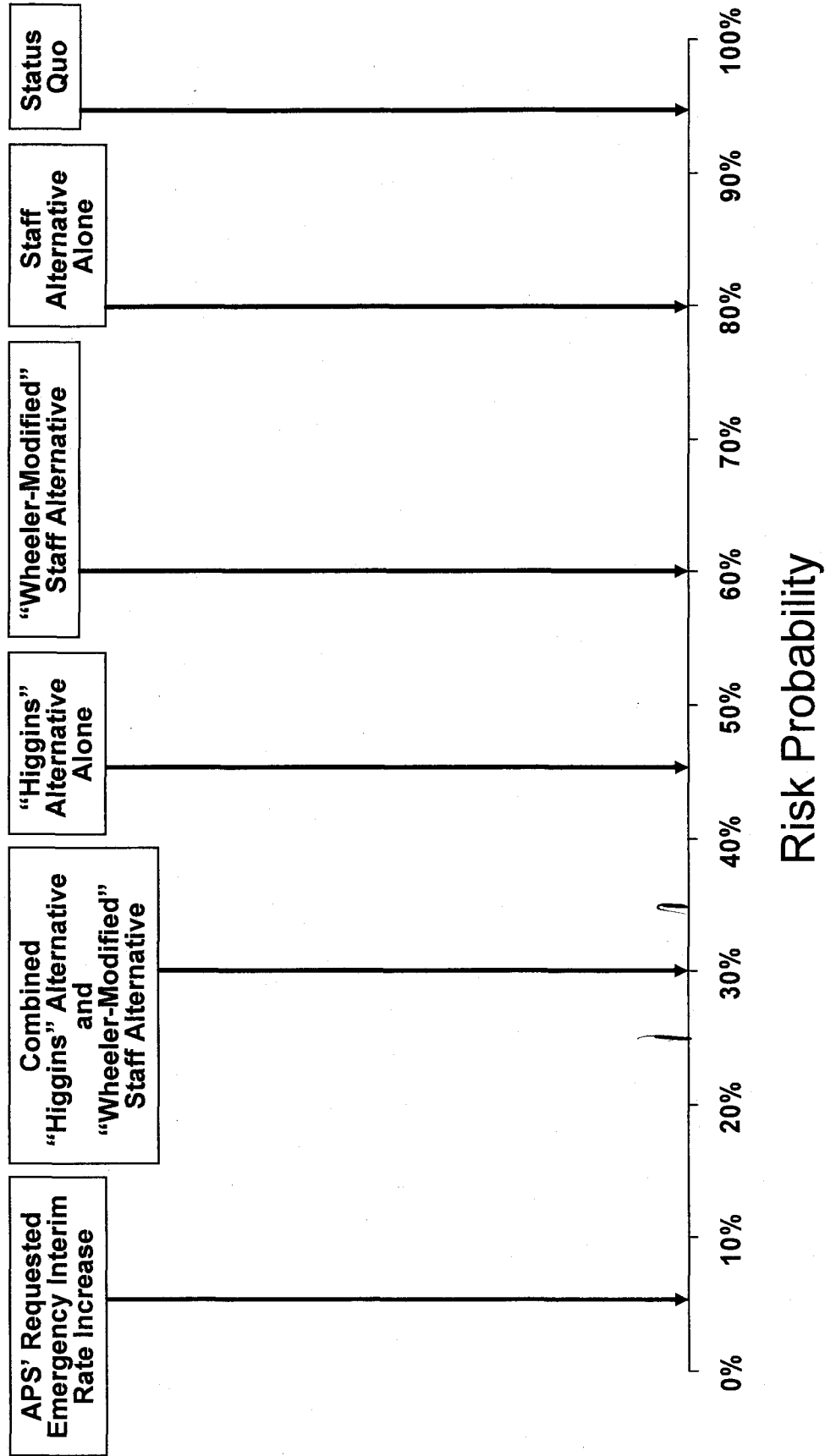
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APS-6  
Admitted

# Arizona Public Service Company

## Risk of Credit Rating Downgrade to Junk\*

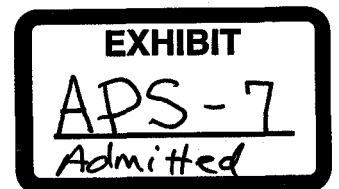


\* Non-investment grade, S&P "BB+" or lower

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**REBUTTAL TESTIMONY OF STEVEN M. FETTER**  
**On Behalf of Arizona Public Service Company**  
**Docket No. E-01345A-06-0009**

**March 13, 2006**



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**REBUTTAL TESTIMONY OF STEVEN M. FETTER  
PRESIDENT, REGULATION UnFETTERED  
ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY  
DOCKET NO. E-01345A-06-0009  
BEFORE THE  
ARIZONA CORPORATION COMMISSION**

**I. INTRODUCTION**

1

2

3 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

4 A. My name is Steven M. Fetter, and my business address is 1489 West  
5 Warm Springs Road, Suite 110, Henderson, NV 89014.

6

7 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

8 A. I am President of REGULATION UnFETTERED, an energy advisory firm I  
9 started in April 2002. Prior to that, I was employed by Fitch, Inc. ("Fitch"),  
10 a credit rating agency based in New York and London. Prior to that, I  
11 served as Chairman of the Michigan Public Service Commission  
12 ("Michigan PSC" or "Michigan Commission").

13

14 **Q. PLEASE BRIEFLY DESCRIBE YOUR ROLE AS PRESIDENT OF**  
15 **REGULATION UnFETTERED.**

16 A. I formed an energy advisory firm to use my financial, regulatory, legislative  
17 and legal expertise to aid the deliberations of regulators, legislative  
18 bodies, and the courts, and to assist them in evaluating regulatory issues.  
19 My clients include electric and gas utilities, state public utility commissions

1 and consumer advocates, a non-utility energy supplier, international  
2 financial services and consulting firms, and investors.

3  
4 **II. SUMMARY**

5  
6 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
7 **PROCEEDING?**

8 A. I have been asked to respond to Staff and Intervenor testimony regarding  
9 the appropriate regulatory response to the Company's current financial  
10 condition and the likelihood of a credit rating downgrade to below  
11 investment-grade or "junk" status. In so doing, I also will provide  
12 background information on these issues to put them in clear perspective.

13  
14 **Q. COULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?**

15 A. In this testimony, I respond to Staff and Intervenor witnesses by offering  
16 my opinion, based upon my prior experience as head of the utility ratings  
17 practice at a major credit rating agency, chairman of a state public utility  
18 commission, and consultant to utilities, utility commissions, consumer  
19 advocates and investors as to how the Arizona Corporation Commission  
20 ("Commission") should deal with the difficult situation of having to balance  
21 a regulated utility's need to ensure continuing reliable service to  
22 customers in an environment of escalating power supply costs with the  
23 financial health of that company. Specifically, I focus on the manner in

1     which investment-grade credit ratings for APS accrue to the benefit of both  
2     investors and customers, and the importance of the Commission making  
3     regulatory decisions consistent with the goal of maintaining such ratings  
4     for APS going forward. On this point I offer cautions about the financial  
5     costs that would be borne by both investors and customers if APS' credit  
6     ratings were to be downgraded into below investment-grade or junk status  
7     by any of the three major credit rating agencies due to uncertainty over the  
8     timing or extent of recovery of APS' rapidly growing deferred amounts  
9     related to fuel and purchased power costs.

10  
11     Contrary to the views expressed by RUCO witness Cortez and Staff  
12     witnesses Smith and Woolridge that emergency rate relief is not called for  
13     under current circumstances, I explain why such relief is merited by citing  
14     comments from the three major credit rating agencies indicating that APS  
15     currently faces a dire situation with regard to its ratings status which is just  
16     above the investment-grade/below investment-grade dividing line.

17     Specifically, while citing comments from Moody's and Fitch, I focus on  
18     statements from S&P, the credit rating agency that has published the most  
19     regarding their insights into the regulatory developments in Arizona over  
20     the past two years. In those comments, S&P offers warnings about the  
21     framework of the power supply adjustor ("PSA") that came out of the APS  
22     rate case settlement last spring, as modified in January 2006, and the risk



1 of financial damage to APS' financial condition that could occur as a result  
2 of those structural flaws.

3  
4 For a utility like APS, whose customer growth means that it has to rely  
5 upon a substantial amount of purchased power and Company-owned  
6 natural gas generation, a power supply adjustment mechanism to reflect  
7 actual costs is a key factor in the eyes of the financial community. While  
8 Wall Street was encouraged by the introduction of a PSA for APS last  
9 year, the way in which the PSA has operated has not been consistent with  
10 the theoretical underpinnings of other PSA-like mechanisms that are being  
11 utilized across the U.S. nor, for that matter, as the PSA in Arizona was  
12 intended to operate when it was negotiated by the parties to APS' last rate  
13 case. I believe it is incumbent upon the Commission to build upon its  
14 introduction of the concept and formulate a means by which it can provide  
15 timely recovery of power supply costs more in line with the mainstream of  
16 regulatory practice across the U.S. *On this point, I discuss how the*  
17 *existing PSA has resulted in large unrecovered power supply cost*  
18 *balances for APS and that uncertainty with regard to ultimate recovery of*  
19 *these substantial deferred amounts has led S&P to downgrade APS'*  
20 *corporate credit rating to the lowest investment-grade level.*

21  
22 In view of the difficult circumstances confronting APS, I encourage the  
23 Commission to be aggressive in dealing with these issues. As Don

1 Brandt, APS' chief financial officer, explains in his testimony, APS has  
2 never held below investment-grade ratings from any credit rating agency  
3 at any time during its history. I firmly believe that, if the Commission were  
4 to allow APS to join the few regulated utilities that hold that negative  
5 status, it would represent a major mistake whose harm will be felt by all  
6 stakeholders who are affected by APS' provision of utility service in  
7 Arizona.

8  
9 As opposed to the Staff proposal to institute a quarterly surcharge process  
10 or industrial Intervenor witness Higgins' concept of a formula pegged to a  
11 credit rating financial measure, I explain that by acting promptly to provide  
12 recovery for APS' growing deferred power supply costs, this Commission  
13 will benefit customers by providing APS with the ability to ensure efficient  
14 and reliable service at a reasonable cost. At the same time, the  
15 Commission will also be respecting the interests of investors who are  
16 continually called upon to provide the funding necessary for APS to  
17 operate in its customers' interests, consistent with the policy goals set by  
18 this Commission.

1 **III. BACKGROUND AND QUALIFICATIONS**

2

3 **Q. PLEASE BRIEFLY DESCRIBE FITCH'S BUSINESS DURING YOUR**

4 **TENURE THERE.**

5 A. Fitch is the third largest full service credit rating agency in the United

6 States – after its two major competitors, Standard & Poor's ("S&P") and

7 Moody's Investors Service ("Moody's") -- and the largest European rating

8 agency. It is one of four Nationally Recognized Statistical Rating

9 Organizations recognized by the U.S. Securities and Exchange

10 Commission. It is also recognized by the U.S. Department of Labor, state

11 bank and thrift regulators, and the National Association of Insurance

12 Commissioners. Fitch performs credit ratings of corporate obligations,

13 asset-backed transactions, and government and municipal debt. While

14 fees are paid by bond issuer clients, Fitch views its true clients to be bond

15 investors. Accordingly, bond ratings represent Fitch's independent

16 judgment based upon financial data provided by the bond issuer as well

17 as additional quantitative and qualitative information gathered from third-

18 party sources.

19

20 **Q. WHAT WAS YOUR ROLE DURING YOUR EMPLOYMENT WITH**

21 **FITCH?**

22 A. I was Group Head and Managing Director of the Global Power Group

23 within Fitch. In that role, I served as group manager of the combined 18-

1 person New York and Chicago utility team and was also responsible for  
2 interpreting the impact of regulatory and legislative developments on utility  
3 credit ratings. In April 2002, I left Fitch to start REGULATION  
4 UnFETTERED, an energy advisory firm.  
5

6 **Q. HOW LONG WERE YOU EMPLOYED BY FITCH?**

7 A. I was employed by Fitch from October 1993 until April 2002. In addition,  
8 Fitch retained me as a consultant for a period of approximately six months  
9 shortly after I resigned.  
10

11 **Q. HOW DOES YOUR EXPERIENCE AT FITCH RELATE TO YOUR**  
12 **TESTIMONY IN THIS PROCEEDING?**

13 A. At the time I was hired, Fitch intended to supplement the traditional  
14 quantitative analysis that went into the firm's utility credit ratings with a  
15 new emphasis on qualitative analysis. Fitch sought my assistance on the  
16 regulatory, legislative and political credit rating factors that would  
17 accompany U.S. movement toward a less regulated, more competitive  
18 utility environment, both on the electric side as well as within the natural  
19 gas industry. I guided the Global Power Group in incorporating these  
20 issues into individual utility credit profiles.  
21

22 My experience with Fitch has given me solid insight into the importance of  
23 a regulator's role in both setting rates and also determining appropriate

1 terms and conditions of service. These are the factors that enter into the  
2 process of utility credit analysis and formulation of individual company  
3 credit ratings. It goes without saying that a company's credit ratings have  
4 a significant impact as to whether a utility will be able to raise capital on a  
5 timely basis and upon favorable terms.

6  
7 **Q. PLEASE DESCRIBE YOUR SERVICE ON THE MICHIGAN PUBLIC**  
8 **SERVICE COMMISSION.**

9 A. I was appointed as a Commissioner to the three-member Michigan PSC in  
10 October 1987 by Democratic Governor James Blanchard. In January  
11 1991, I was promoted to Chairman by incoming Republican Governor  
12 John Engler, who reappointed me in July 1993. During my tenure as  
13 Chairman, the Michigan PSC eliminated the agency's case backlog for the  
14 first time in 23 years.

15  
16 **Q. WAS THERE ANY ASPECT OF YOUR EXPERIENCE AT THE**  
17 **MICHIGAN PSC THAT PARTICULARLY RELATES TO YOUR**  
18 **TESTIMONY IN THIS PROCEEDING?**

19 A. Yes. During my six years at the Michigan PSC, my colleagues and I  
20 sought to effectuate policies that would encourage regulated utilities to  
21 provide customers with reliable electric and natural gas service in a cost-  
22 effective manner. A core aspect of those responsibilities involved virtually  
23 continuous decision-making with regard to the prudence of regulated utility

1 actions and recovery of prudently-incurred costs. Moreover, as the utilities  
2 operating under the jurisdiction of the Michigan PSC during my tenure  
3 were operating under conditions of significant financial stress, our  
4 determinations often went beyond traditional evaluations of prudence and  
5 related recovery -- we also issued decisions that aimed to ensure that the  
6 financial health of the state's utilities would remain sufficient for them to be  
7 able to provide reliable service to all consumers, and also that investors  
8 would maintain their interest in providing necessary funding on a timely  
9 basis upon reasonable terms.

10  
11 I believe that the circumstances I have described above are relevant to the  
12 issues before the Arizona Corporation Commission ("Commission") in this  
13 proceeding, and I will further elaborate upon these points within the  
14 remainder of my testimony.

15  
16 **Q. PLEASE DESCRIBE YOUR OTHER PRIOR PROFESSIONAL**  
17 **EXPERIENCE RELATED TO THE UTILITY INDUSTRY.**

18 **A.** During my time on the Michigan PSC, I served as Chairman of the Board  
19 of Directors of the National Regulatory Research Institute ("NRRI") at Ohio  
20 State University, the regulatory research arm of the 50 state and District of  
21 Columbia public utility commissions. In 2003 I was appointed by the  
22 President of the National Association of Regulatory Utility Commissioners  
23 ("NARUC") to serve as a public member of the NRRI Board -- the 20-

1 member board includes ten state public utility commissioners. I was  
2 reappointed to the NRRI Board for a three-year term in June 2005. I also  
3 have served on the Keystone Center Energy Board (a nonprofit public  
4 policy board that brings together diverse stakeholders related to the  
5 energy industry as well as appointed and elected federal and state  
6 policymakers to discuss challenges facing the sector), after having  
7 participated in the Keystone Center Dialogues on Financial Markets and  
8 Energy Trading and on Regional Transmission Organizations. In  
9 February 2002, I was appointed to the Board of Directors of CH Energy  
10 Group, Inc. ("CHG"), the parent company of Central Hudson Gas &  
11 Electric in Poughkeepsie, New York. I currently serve as chairman of the  
12 CHG Audit Committee.

13  
14 **Q. HAVE YOU PREVIOUSLY SPONSORED TESTIMONY BEFORE**  
15 **REGULATORY AND LEGISLATIVE BODIES?**

16 **A.** Since 1990, I have on numerous occasions testified before the U.S.  
17 Senate, the U.S. House of Representatives, the Federal Energy  
18 Regulatory Commission, and various state legislative and regulatory  
19 bodies on the subjects of credit risk within the utility sector, electric and  
20 natural gas utility restructuring, utility securitization bonds, and nuclear  
21 energy. During 2004, I sponsored testimony on behalf of Arizona Public  
22 Service Co. ("APS" or "Company") before the Commission in APS' general  
23 rate case, Docket No. E-01345A-03-0437. I also sponsored testimony on

1       behalf of APS during the proceeding that followed to consider the  
2       appropriateness of the settlement agreement that was filed within that rate  
3       case. Recently, I sponsored testimony in APS' current pending rate case,  
4       Docket No. E-01345A-05-0816. Finally, I have also filed testimony before  
5       this Commission in 2004 on behalf of Southwest Gas Corporation in  
6       Docket No. G-01551A-04-0876.

7  
8               **IV. GROWING FUEL AND PURCHASED POWER COST**  
9               **DEFERRALS PLACE APS' INVESTMENT-GRADE STATUS IN**  
10              **SERIOUS JEOPARDY**

11  
12   **Q.   HOW HAVE THE THREE MAJOR CREDIT RATING AGENCIES**  
13       **REACTED TO THE UNCERTAINTY RELATED TO APS' RAPIDLY**  
14       **GROWING DEFERRED POWER SUPPLY COSTS?**

15   **A.   Let me begin with S&P because they have published the most on the**  
16       utility regulatory process during the past couple of years. In October  
17       2005, S&P expressed increasing concern about APS' growing amount of  
18       deferrals, related both to day-to-day power supply for core customers, as  
19       well as replacement power related to a nuclear outage earlier this year:

20               ...it is clear that timely near-term [power] cost collection will be the  
21               key driver of credit quality. [S&P] is becoming increasingly  
22               concerned with the utility's ability to achieve this. A relatively weak  
23               power supply adjustment mechanism, in combination with rapidly  
24               escalating and volatile gas prices, as well as the potential for a  
25               protracted surcharge proceeding, could cause deterioration in  
26               financial performance which, year to date, has been sub par for the



1 rating.<sup>1</sup>

2  
3 Then, on December 21, 2005, S&P downgraded APS' corporate credit  
4 rating to 'BBB-', the lowest investment-grade level. S&P explained its  
5 rationale:

6 This action is based on increased regulatory and operating risk at  
7 APS. Specifically, [S&P] is concerned that the [ACC] is not  
8 expeditiously addressing APS' growing fuel and purchased-power  
9 cost deferrals, which have grown much more rapidly than expected  
10 in 2005, particularly because of elevated gas prices and the utility's  
11 increased dependence on this fuel. In November 2005, APS filed  
12 for a nearly 20% increase in customer electric rates, but it appears  
13 unlikely that a resolution will be reached until 2007, and may be  
14 delayed to mid-2007.<sup>2</sup>

15  
16 S&P went on to discuss the infirmities it sees with the PSA:

17 The stable outlook reflects [S&P's] expectation that the ACC will  
18 resolve at least a portion of APS's increasing deferred power costs  
19 in January 2006. In addition, the outlook presumes that progress  
20 will be made in addressing APS' general rate case and that any  
21 outcome will support the return of consolidated financial metrics to  
22 what until 2004 was a reasonable performance...Any adverse  
23 regulatory development or continued delays in resolving the  
24 pending surcharge request could result in a downward revision of  
25 the outlook or an adverse rating action.<sup>3</sup>

26  
27 On January 25, 2006, the Commission ameliorated the flaws within the  
28 PSA to a minor degree, lifting the \$776 million cap and providing a rate  
29 increase of just under five percent to recover deferred amounts beginning  
30 February 1, 2006. While S&P found these changes to be "favorable," the  
31 rating agency looked to the decision as "an important indicator that the  
32 ACC acknowledges that timely action is necessary to limit cash flow

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<sup>1</sup> S&P Research: Arizona Public Service Co., October 4, 2005.

<sup>2</sup> S&P Research Update: "Pinnacle West Capital's, Arizona Public Service's Ratings Lowered to 'BBB-'; Outlook Stable," December 21, 2005.

<sup>3</sup> Ibid.

1 pressure on the company." That said, S&P remains concerned "over the  
2 timing and disposition of future, expected deferrals."<sup>4</sup>

3  
4 I have testified before this Commission on several occasions as to the  
5 importance of qualitative factors within the credit rating process, with  
6 regulation by far the most important of these non-financial factors. In  
7 January 2004, S&P wrote that "the regulation of public utilities is the  
8 defining element of the industry and is often the determining factor in the  
9 ratings of a utility."<sup>5</sup> A few months earlier in a presentation at a National  
10 Association of Regulatory Utility Commissioners Meeting, S&P highlighted  
11 why regulation is a key part of the ratings process: "The safety net of  
12 regulatory oversight provides credit strength by enabling utility companies  
13 to carry higher debt balances and realize less cash flow protection  
14 measures than their comparably rated industrial counterparts."<sup>6</sup> S&P has  
15 also stated that "[w]hen examining the quality of regulation, [S&P] factors  
16 in what level of support the utility might get in times of distress, when its  
17 needs are most acute."<sup>7</sup> Moody's holds a consistent view, noting that the  
18 degree to which regulators support their utilities can make a difference in  
19 the level of their ratings: "transmission and distribution company ratings  
20 are likely to remain diverse based on the level of support provided by the

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<sup>4</sup> S&P Research Update: "APS, PWCC's 'BBB-' Corporate Credit Ratings Affirmed on ACC Vote But Challenges Continue," January 26, 2006.

<sup>5</sup> S&P Research: "A Fresh Look at U.S. Utility Regulation," January 29, 2004.

<sup>6</sup> Presentation of Suzanne Smith, Director, S&P, NARUC Meeting, Columbus, Ohio, September 15, 2003.

<sup>7</sup> S&P Research: "Regulation and Credit Quality in the U.S. Utility Sector," January 30, 2003.

1 appropriate regulator.”<sup>8</sup>

2  
3 To me, S&P’s recent press releases about APS indicate that the rating  
4 agency is looking for additional support from the Commission for  
5 significant near-term cash recovery by APS for its power supply  
6 expenditures that were prudently-incurred. If APS is able to receive such  
7 recovery, I believe S&P will gain comfort that the entire amount of  
8 deferrals will be addressed fairly and on a timely basis and that,  
9 accordingly, there would not be a reason to consider a downgrade of APS’  
10 ratings into below investment-grade or junk bond status. Conversely,  
11 failure by the Commission to provide near-term financial recovery for APS’  
12 prudently-incurred fuel and purchased power costs will subject the  
13 Company to a substantial likelihood that S&P (and potentially other rating  
14 agencies) will further downgrade APS into junk bond territory. APS  
15 estimates that such negative action could cost the Company and its  
16 customers in excess of one billion dollars in additional interest and fees  
17 over the next ten years.

18  
19 **Q. AND THE OTHER TWO AGENCIES?**

20 **A.** On January 10, 2006, Moody’s placed the ‘Baa1’ senior unsecured credit  
21 rating of APS under review for downgrade. Moody’s explained its  
22 concerns:

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<sup>8</sup> Moody’s Global Credit Research: “Credit Risks of U.S. Investor-Owned Electric Utilities,” September 1998.

1 The review is prompted by deterioration in the company's current  
2 and projected financial metrics as a result of increased fuel and  
3 purchased power costs that the company has not been able to  
4 recover on a timely basis...APS and [parent company Pinnacle  
5 West's] financial strength are highly dependent upon timely  
6 implementation of cost recovery mechanisms...Last week, an [ALJ]  
7 recommended denial of APS' request to implement the special  
8 surcharge of approximately 2% even though the ACC staff and a  
9 major consumer group agreed to its implementation shortly after  
10 the request was made in July 2005...Beyond 2006, supportive  
11 regulatory treatment remains key to the company's ability to  
12 maintain financial strength in light of significant needs for capital  
13 investment to serve a growing service territory...An assessment of  
14 likely regulatory outcomes will be a significant factor in concluding  
15 the review for downgrade. The ratings of APS and Pinnacle are  
16 likely to be downgraded unless there are clear signals that APS will  
17 receive timely and full recovery of its increased costs...<sup>9</sup>  
18

19 Three weeks later, on January 30, 2006, notwithstanding the  
20 Commission's modifications to the PSA structure and small rate increase  
21 a few days earlier, Fitch downgraded APS' senior unsecured ratings to  
22 'BBB' with a Stable Outlook, stating:

23 ...the ACC bench order rejecting APS's \$80 million surcharge  
24 request on procedural grounds and restriction of PSA adjustments  
25 to an annual reset is less favorable than Fitch had anticipated in its  
26 previous ratings and is a significant source of concern for [Pinnacle  
27 West] and APS fixed-income investors. The fact that there is no  
28 vehicle within the PSA protocol to recover supply costs more  
29 frequently than annually during periods of sustained high and rising  
30 energy costs subjects APS to significant cash flow volatility and  
31 working capital requirements...The only option to recover fuel and  
32 purchase power costs above amounts determined annually in the  
33 PSA would be an emergency rate filing, in which the timing and  
34 amount of rate relief would be uncertain.<sup>10</sup>  
35

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<sup>9</sup> Moody's Global Credit Research: "Moody's Places the Debt Ratings of Pinnacle West (Sr. Uns. Baa2) and Arizona Public Service Co. (Sr. Uns. Baa1) Under Review for Downgrade," January 10, 2006.

<sup>10</sup> Fitch Press Release: "Fitch Lowers PNW & APS' Sr. Unsecured Ratings to 'BBB-' and 'BBB', Respectively; Outlook Stable," January 30, 2006.

1    **Q.    HOW DOES THE EXPLOSION IN FUEL AND PURCHASED POWER**  
2           **COSTS FIT WITH THE USE OF POWER SUPPLY ADJUSTMENT**  
3           **MECHANISMS HERE AND IN OTHER STATES?**

4    A.    Uncertainty with regard to fuel cost volatility is the very reason that a  
5           majority of states utilize a properly-structured power supply adjustment  
6           mechanism in the first place – so that a utility can carry out its  
7           responsibility to provide reliable service to customers at the best cost  
8           available under then-existing circumstances, without having to be  
9           concerned that its prudent expenditures in this regard might be found to  
10          be unrecoverable at a later time. Since regulated utilities do not earn any  
11          profit or return on their fuel and purchased power expenditures, such  
12          expenses are presumed to be prudent and the rating agencies expect that  
13          utilities will recover them without undue obstacles. Under APS' current  
14          circumstances, rating agencies have concerns about both the timing as  
15          well as the extent of ultimate recovery of these costs.

16  
17   **Q.    DOES THE FACT THAT THE THREE MAJOR AGENCIES HAVE**  
18           **CREDIT RATINGS FOR APS ARRAYED ACROSS THE 'BBB'**  
19           **CATEGORY SUGGEST THAT PERHAPS S&P'S NEGATIVE VIEW ON**  
20           **APS' SITUATION AT THE ARIZONA COMMISSION SHOULD NOT BE**  
21           **A MAJOR CONCERN FOR EITHER THE COMMISSION OR**  
22           **INVESTORS?**

1 A. No, I do not agree with that view. I need to emphasize that a downgrade  
2 of a utility's credit ratings to below investment-grade status by any of the  
3 three major credit rating agencies would be a significant negative event for  
4 investors – and this is especially true if the downgrading agency were to  
5 be either S&P or Moody's. Such an action, even if only by S&P, would  
6 draw much greater scrutiny of the Arizona regulatory environment by  
7 investors and the likely divestiture of APS/Pinnacle West securities by  
8 some investors whose circumstances place them in the particularly  
9 tenuous position of being required to sell their holdings if a second agency  
10 were to join S&P in lowering APS to junk status. The easiest course for  
11 such investor would be to divest its equity and/or debt holdings before it is  
12 required to do so, with some financial harm, rather than await what could  
13 be a much more painful financial blow depending upon what this  
14 Commission decides with regard to power supply cost recovery and APS'  
15 base rate levels -- and how the credit rating agencies react to those  
16 decisions.

17  
18 **Q. S&P AND FITCH HAVE OUTLOOKS ON APS OF STABLE AND**  
19 **MOODY'S AT 'Baa1' IS THE ONLY AGENCY WITH APS UNDER**  
20 **REVIEW FOR DOWNGRADE. ISN'T THIS MUCH ADO ABOUT**  
21 **NOTHING?**

22 A. No it is not. I believe that both S&P and Fitch currently have APS with a  
23 "Stable" ratings outlook because they believe that the Commission will

1 resolve these power supply cost recovery matters appropriately within a  
2 reasonable near-term timeframe. S&P said as much on January 26, 2006:

3 The stable outlook is premised on the ACC providing sustained  
4 regulatory support that adequately addresses building deferrals.  
5 Negative rating actions could result if regulatory support does not  
6 continue, or if market forces or operational issues lead to significant  
7 increases in the expected 2006 deferral level.<sup>11</sup>  
8

9 Fitch offered similar sentiments on January 30, 2006:

10 The fact that there is no vehicle within the PSA protocol to recover  
11 supply costs more frequently than annually during periods of  
12 sustained high and rising energy costs subjects APS to significant  
13 cash flow volatility and working capital requirements. Such costs  
14 would be exacerbated in a meaningful way by an extended outage  
15 of a base load nuclear- or coal-fired generating facility during  
16 periods of peak demand. The only option to recover fuel and  
17 purchase power costs above amounts determined annually in the  
18 PSA would be an emergency rate filing, in which the timing and  
19 amount of rate relief would be uncertain.<sup>12</sup>  
20

21 It is clear from these statements that the rating agencies are not willing to  
22 wait for the latter half of 2006 or even into 2007 for action by the  
23 Commission on APS' rapidly growing deferral balances. If it becomes  
24 clear that such positive action will not occur until many months have  
25 passed, I would expect that the "Stable" designation will not prevent  
26 further near-term rating downgrades. Significantly, it is important to note  
27 that both S&P in December 2005 and Fitch in January 2006 downgraded  
28 APS while "Stable" outlooks were outstanding on the Company's ratings.  
29

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<sup>11</sup> S&P Research Update: "APS, PWCC's 'BBB-' Corporate Credit Ratings Affirmed on ACC Vote But Challenges Continue," January 26, 2006.

<sup>12</sup> Fitch Research: "Fitch Lowers PNW & APS' Sr. Unsecured Ratings to 'BBB-' & 'BBB', Respectively; Outlook Stable," January 30, 2006.

1    **Q.    WOULD ADOPTION OF THE STAFF PROPOSAL CALLING FOR THE**  
2           **COMMISSION TO INSTITUTE QUARTERLY SURCHARGE**  
3           **PROCEEDINGS PROVIDE THE TYPE OF POSITIVE ACTION THE**  
4           **RATING AGENCIES ARE LOOKING FOR?**

5    A.    While clearly the adoption of more frequent reviews of fuel and purchased  
6           power costs would be a positive act, I believe APS' current situation with  
7           ratings at 'BBB-' is too dire for the rating agencies to gain sufficient  
8           comfort from modified procedures whose structure would not be certain  
9           and whose timing would still place any additional cost recovery into the  
10          second half of 2006, if not later. I have consistently testified in this  
11          jurisdiction as well as across the U.S. that these are very dangerous times  
12          for a utility to be near the threshold between investment-grade and non-  
13          investment-grade ratings. For a utility with such weak ratings, one  
14          negative blip of any type – whether it be nuclear performance, severe  
15          weather, new legislative or regulatory mandates that raise costs and  
16          questions of ultimate recovery (such as the power supply situation here),  
17          or other operational challenges – can push that company into junk status,  
18          at an immediate cost to investors and an eventual financial impact on  
19          customer rates. If the Commission agrees that 'BBB-', a notch away from  
20          the harm that comes with junk status, is not the appropriate place for APS  
21          to be, it is incumbent upon the Commission to shorten the period of time  
22          during which the Company remains subject to this elevated risk.

23



1    **Q.    AND THE HARM TO APS CUSTOMERS OF APS' CURRENT RISKY**  
2    **RATINGS LEVEL?**

3    A.    Diminishing interest on the part of investors leads to higher capital costs  
4    that traditionally get flowed through rates to customers. If this  
5    Commission intends to ultimately make APS whole for its prudent  
6    expenditures, I firmly believe it is better to start now while investor interest  
7    in APS remains at an adequate level. Such immediate action would also  
8    serve to decrease the downgrade risk to APS, especially as it enters the  
9    particularly risky peak summer season.

10

11   **Q.    HAS APS BEGUN TO SEE NEGATIVE FINANCIAL EFFECTS FROM**  
12   **THE RATING AGENCIES' RECENT ACTIONS THUS FAR?**

13   A.    Yes they have. I will leave it to APS witness Brandt, to discuss those  
14   negative impacts in detail, but it is my understanding that APS has already  
15   seen an approximately \$1 million annual increase in higher short-term  
16   debt rates and increased bank facility costs to the lower-rated company.  
17   Also, while APS has not done any long-term financing since August 2005,  
18   interest costs of a financing at this point undoubtedly would reflect the  
19   more negative credit rating circumstances that APS is experiencing  
20   compared to a year ago. Of course the situation would become much  
21   worse if APS were to be downgraded another notch to below investment-  
22   grade or junk status.

23

1    **Q.    WHAT ARE SOME OF THE CONSEQUENCES IF APS' CREDIT**  
2       **RATING WERE TO FALL BELOW INVESTMENT-GRADE QUALITY?**

3    A.    There would be a marked change in the investor profile for the Company.  
4       Major utility investors such as insurance companies and pension funds  
5       operate under legal restrictions that severely limit their ability to invest in  
6       below investment-grade debt instruments, or "junk bonds." Mutual funds  
7       could also be affected based upon what a particular fund has  
8       communicated to investors as to its investment profile. Moreover, a utility  
9       with a "junk bond" rating is likely to have to post bond or put up cash as  
10      collateral in various contracts (such as for power supply) or to meet certain  
11      regulatory commitments. This, of course, would come at a time when  
12      APS' ability to tap new credit facilities likely would be limited by the  
13      financial institutions previously providing the assistance. Finally, a utility  
14      with below investment-grade status cannot access the commercial paper  
15      (short-term debt) market. Commercial paper is a key source of funding for  
16      utilities (including APS), many of which have revenues that vary  
17      substantially depending upon the time of year, and loss of access to that  
18      market can severely impair financial liquidity and flexibility.

19  
20   **Q.    IS IT EASY FOR A COMPANY THAT HAS BEEN DOWNGRADED TO**  
21       **REGAIN ITS PRIOR CREDIT RATING?**

22   A.    No, not at all. It is important to emphasize that within the more volatile  
23       investment climate, it is far easier for a utility's ratings to slip down due to

1 a financial "ding" than for that same utility to regain its earlier status once  
2 the deficiency has been remedied.

3  
4 Indeed, analysis of credit rating experiences in two nearby states –  
5 California and Nevada -- is instructive as to how difficult it can be to  
6 bounce back from a major negative ratings event. In mid-1997, Pacific  
7 Gas & Electric Co. ("PG&E") and Southern California Edison Co. ("SCE")  
8 both held strong 'A+' ratings from S&P with Positive Outlooks. We all are  
9 familiar with the regulatory debacle that ensued related to California's  
10 competitive restructuring initiative. As a result of that flawed effort, both  
11 companies went into default on their debt obligations in January 2001,  
12 with PG&E filing for bankruptcy and SCE agreeing to a regulatory  
13 settlement to avoid having to file for bankruptcy. Different leadership at  
14 the California Public Utilities Commission and within the California  
15 Legislature has led to new regulatory policies and laws that are more  
16 supportive of the financial condition of the two utilities. The result in that  
17 now, five years later, PG&E and SCE have improved their credit profiles to  
18 the point of holding ratings in the 'BBB' category: PG&E is at 'BBB' with a  
19 Stable Outlook, four notches below its 1997 status, and SCE holds a  
20 rating of 'BBB+' with a Stable Outlook, three notches below its earlier  
21 status.

1 Nevada Power Co. ("Nevada Power") is perhaps the regulated utility  
2 whose recent circumstances most closely tracked what APS is going  
3 through today. In April 1999, Nevada Power had a rating of 'BBB+' with a  
4 Positive Outlook. Unfortunately, Nevada Power became what I describe  
5 as an "innocent victim" of the failed California competitive experiment that  
6 sent wholesale electricity prices soaring in the West. Nevada Power paid  
7 those prices to ensure continued reliable supply for its customers, only to  
8 have the Nevada Public Utilities Commission deny recovery of \$437  
9 million of those costs. By April 2002, Nevada Power's credit ratings from  
10 S&P had fallen to 'B+' with a Negative Outlook, deep into non-investment-  
11 grade territory. Since that time, similar to what occurred in California,  
12 state regulators have sought to be supportive of Nevada Power's return to  
13 financial health. Today, four years later, however, Nevada Power's ratings  
14 still remain at 'B+'.

15  
16 It should be clear that a continuation in the weakening of APS' credit  
17 profile now could not, if the Commission were to change its mind, be  
18 easily remedied in the Company's next proceeding. My advice to utility  
19 companies, investors and regulators alike is that nothing should be taken  
20 for granted in the current investing environment.

1 Q. HAVE YOU REVIEWED THE DIRECT TESTIMONY OF STAFF  
2 WITNESSES SMITH AND WOOLRIDGE AND RUCO WITNESS  
3 CORTEZ?

4 A. Yes I have.  
5

6 Q. DO YOU DISAGREE WITH THEIR ASSESSMENT OF APS' CURRENT  
7 SITUATION?

8 A. Surprisingly, while I disagree with their ultimate conclusion with regard to  
9 emergency rate relief, I find much to agree with in what they say.  
10

11 Q. HOW SO?

12 A. First, with regard to Ms. Cortez, she says:

13 Such a downgrade to junk status would have long-term detrimental  
14 effects on the Company and its ability to serve its growing customer  
15 base. Downgrade to junk status would also have constrained APS'  
16 access to debt, which would have constrained APS' ability to  
17 finance the infrastructure needed to serve its growing customer  
18 base.  
19

20 No argument from me on these thoughts. As long as APS remains at  
21 'BBB-', Ms. Cortez's cautions remain valid.  
22

23 Q. AND THE STAFF WITNESSES – DO YOU SEE AGREEMENT WITH  
24 THEM?

25 A. I do. With regard to Mr. Smith, I agree that the downgrading of APS' debt  
26 to junk status would not be a desirable outcome, and that the result would

1 be increased borrowing cost and possibly the impeding of the Company's  
2 access to credit. I disagree, however, that there is no imminent risk of a  
3 downgrade for APS under current industry conditions. I address above  
4 Staff witnesses Smith's and Woolridge's erroneous contention that a  
5 "Stable" outlook means that all is well with the rating agencies and that  
6 there is no possibility of a downgrade for APS to junk status at this time.

7  
8 Further, I agree with Mr. Woolridge that "regulatory climate" is a credit  
9 rating factor to be considered in concert with financial measures. Indeed,  
10 at the present time, I believe that the Arizona regulatory climate is as  
11 much a concern to S&P as APS' specific financial ratios, although the two  
12 are obviously intertwined.

13  
14 **Q. HOW ARE YOU IN DISAGREEMENT WITH MS. CORTEZ, MR. SMITH**  
15 **AND MR. WOOLRIDGE?**

16 **A.** For the reasons I explain above, 'BBB-' is just too dangerous a rating level  
17 for APS to hold during the months that will pass after the decision in this  
18 proceeding and until final decisions are issued related to recovery of  
19 power supply costs followed many months later by base rate  
20 determinations. At that weak rating level, any negative event can push  
21 APS below investment-grade status into junk territory – and, from my  
22 review of staff and intervenor testimony, I do not believe that any of those  
23 witnesses would disagree with me that such an occurrence would exact a

1 heavy financial toll on both customers and investors.

2  
3 I also break with those other witnesses with regard to whether an  
4 emergency exists that would merit emergency rate relief. To be honest, I  
5 was surprised when S&P downgraded APS to 'BBB-' just before  
6 Christmas, especially since S&P's previous announcement on APS had  
7 stated that the Company's 'BBB' rating had a "Stable" outlook. I believed  
8 that the rating agency would wait and attempt to gain greater clarity as to  
9 the likely direction that the Commission was going to take with regard to  
10 operation of the PSA and ultimate recovery of APS' power supply costs.  
11 The fact that S&P did not wait indicates the high degree of concern the  
12 agency holds on this issue – their sudden action has already caused a  
13 negative financial impact on APS (as detailed in the testimony of APS  
14 witness Brandt), and a much larger negative financial blow will remain  
15 lurking for investors and customers for as long as APS remains on the  
16 precipice of junk status. I view that continuation of such status for APS for  
17 an extended period of time is an untenable position for the Company to be  
18 in under current industry conditions.

19  
20 With regard to the appropriateness of emergency rate relief, APS witness  
21 Steven Wheeler discusses that Ms. Cortez's delineation of the standards  
22 for such relief misstates the Attorney General's interpretation (AG Opinion)  
23 from long ago. Mr. Wheeler explains that the three allowable reasons

1 discussed by Ms. Cortez are merely *examples* of grounds for emergency  
2 relief, and that the guidance in the AG Opinion indicates that "the inability  
3 of the Commission to grant permanent relief within a reasonable time  
4 would be grounds for granting emergency relief."

5  
6 While APS' current circumstances clearly fall within that standard, I would  
7 argue that, even under Ms. Cortez's more restrictive reading, at least one  
8 of the explicit criteria for emergency rate relief has been met --  
9 specifically, "A sudden change brings hardship to a company" -- not only  
10 for the Company, but for its customers and investors as well.

11  
12 **Q. PHELPS DODGE MINING CO. AND ARIZONANS FOR ELECTRIC**  
13 **CHOICE AND COMPETITION WITNESS KEVIN HIGGINS PROPOSES**  
14 **A FORMULAIC STEP THE COMMISSION COULD TAKE TO RESOLVE**  
15 **APS' FINANCIAL DIFFICULTIES. DO YOU SEE THAT PROPOSAL TO**  
16 **BE A REASONABLE SOLUTION?**

17 **A.** No I do not. While it is true that APS' Funds from Operations to Total Debt  
18 ("FFO/Debt") is the weakest of its key financial measures that credit rating  
19 agencies place great weight upon, an emergency interim rate increase  
20 that is limited so as to only allow APS to achieve an FFO/Debt ratio of  
21 18%, which represents the borderline between investment-grade and non-  
22 investment-grade ratings, does not resolve the underlying problem. APS  
23 would continue to languish at the edge of junk status, susceptible to any of



1 the myriad of risks that utilities face today that could drive it below  
2 investment grade. (On this point, see APS witness Don Brandt's  
3 Attachment DEB-23, which illustrates the shortfalls in credit strength that  
4 will result from either no Commission action or Commission adoption of  
5 the alternatives put forward by the Staff and Intervenors.)

6  
7 Indeed, putting my former rating agency hat back on, I would view  
8 adoption of Mr. Higgins' proposal to be an effort by the Commission to  
9 take only the most minimal steps to address the true issue – prudent  
10 expenditures undertaken by a regulated utility in order to provide core  
11 customers with reliable service deserve to be recovered on a timely basis  
12 – and I would mark down the quality of the Arizona regulatory environment  
13 accordingly, which negative view would then be incorporated into the  
14 credit profiles of all utilities subject to this Commission's jurisdiction .

15  
16 **Q. IN THE PAST YOU HAVE SHARED WITH THIS COMMISSION SOME**  
17 **OF THE ANALOGOUS ISSUES YOU FACED WHILE SERVING AS A**  
18 **STATE REGULATOR IN MICHIGAN. DO YOU SEE PARALLELS**  
19 **BETWEEN YOUR EXPERIENCES AND THE ISSUES THAT THE**  
20 **COMMISSION IS FACING IN THIS PROCEEDING?**

21 **A.** I do. In my six years as a state regulator, I cannot remember ever  
22 denying recovery for a utility's prudently-incurred costs. Indeed,  
23 notwithstanding relatively high rate levels within the state of Michigan at

1 the time, the Michigan PSC also strove to provide such recovery on as a  
2 timely a basis as was procedurally possible – the same attitude we held if  
3 rates deserved to go down.

4  
5 **V. CONCLUSION**

6  
7 **Q. BASED UPON YOUR EXPERIENCE AS A FORMER STATE**  
8 **REGULATOR AND BOND RATER, AND NOW CONSULTANT TO**  
9 **UTILITIES, COMMISSIONS AND CONSUMER ADVOCATES, DO YOU**  
10 **HAVE ANY CONCLUDING THOUGHTS WITH REGARD TO APS'**  
11 **SITUATION?**

12 **A.** Yes I do. If the Commission here views that APS' deferred power supply  
13 costs were prudently incurred, I strongly encourage action before further  
14 degradation of APS' credit ratings occurs. While raising rates to provide  
15 such recovery is never a welcome task, there would be a much greater  
16 negative impact on customers if their rates were to go up due to a further  
17 downgrade of APS into below investment-grade status, while the issue of  
18 power supply cost recovery remained looming as a potential further rate  
19 escalator sometime later in 2006 or on into 2007. If recovery for sums  
20 that APS has already expended for power supply is merited, I encourage  
21 the Commission to act as expeditiously as possible. To delay doing so  
22 will place APS at much greater risk of a near-term rating downgrade into  
23 junk status that will bring with it both increased stress on reliability for

1 customers on the APS system as well as financial harm to the very  
2 investors that APS would need to be able to eventually return to financial  
3 health.

4

5 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

6 A. Yes it does.



S&P	Moody's	Fitch
BBB-	Baal	BBB

As shown, the only rating agency that has the Company rated one notch above a 'junk' rating is S&P. Nonetheless, the recent trends in APS' bond ratings have been in a negative direction, and the primary reason given for this negative direction of the ratings is the issue involving the collection of deferred power supply charges.

It is important to recognize that these bond ratings are for the Company's unsecured debt. The table below shows the bond ratings for the Company's mortgage bonds, as taken from Bloomberg. As shown, APS' secured debt is rated BBB by Standard and Poor's.

**Arizona Public Services  
Outstanding Bonds  
Corporate Securities**

FNA (9 Bond)		Fin Type	Alt	Qty Type	Alt	Exclude	Rated/called/MTN	Page	1 / 1
Issuer	Coupon	Maturity	Series	Rtg	Qty Type	Announce	Curr	Ask Px	PCS
A1 1) PINNACLE MT CAP	6.400	04/01/06		BBB-	CALLABLE	03/21/01	USD	100.0000	TRAC
A2 2) ARIZONA PUB SERV	6.750	11/15/06		BBB	CALLABLE	11/19/96	USD	100.9700	TRAC
A3 3) ARIZONA PUB SERV	6.375	10/15/11		BBB	CALLABLE	10/02/01	USD	103.9540	TRAC
A4 4) ARIZONA PUB SERV	6.500	03/01/12		BBB	CALLABLE	02/26/02	USD	103.2210	TRAC
A5 5) ARIZONA PUB SERV	5.800	06/30/14		BBB	CALLABLE	06/24/04	USD	100.9140	TRAC
A6 6) ARIZONA PUB SERV	4.650	05/15/15		BBB	BULLET	05/07/03	USD	93.5180	TRAC
7) PWS II FUNDING	8.000	12/30/15		BBB	SINKABLE	03/10/93	USD	110.8181	BFV
A7 8) ARIZONA PUB SERV	5.625	05/15/33		BBB	BULLET	05/07/03	USD	93.4680	TRAC
9) ARIZONA PUB SERV	5.500	03/01/35		BBB	CALLABLE	05/17/05	USD	91.6140	TRAC

Data Source: Bloomberg, February 23, 2006

**Q.** In your opinion, what is the impact of the recent bond rating downgrade on the Company's financial condition?

**A.** The downgrading of the Company's bonds certainly is not a positive for the Company. Nonetheless, recent reports from rating agencies and investment firms suggest that recent actions of the Arizona Corporation Commission ("ACC") appear to have stabilized the

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

Form 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2004

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission  
File Number

Registrants; State of Incorporation;  
Addresses; and Telephone Number

IRS Employer  
Identification No.

1-8962

PINNACLE WEST CAPITAL CORPORATION  
(An Arizona corporation)  
400 North Fifth Street, P.O. Box 53999  
Phoenix, Arizona 85072-3999  
(602) 250-1000

86-0512431

1-4473

ARIZONA PUBLIC SERVICE COMPANY  
(An Arizona corporation)  
400 North Fifth Street, P.O. Box 53999  
Phoenix, Arizona 85072-3999  
(602) 250-1000

86-0011170

Securities registered pursuant to Section 12(b) of the Act:

	Title of Each Class	Name of Each Exchange on Which Registered
PINNACLE WEST CAPITAL CORPORATION	Common Stock, No Par Value	New York Stock Exchange Pacific Stock Exchange
ARIZONA PUBLIC SERVICE COMPANY	None	None

Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark whether each registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or in any amendment to this Form 10-K. ☐

Indicate by check mark whether each registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2).

PINNACLE WEST CAPITAL CORPORATION  
ARIZONA PUBLIC SERVICE COMPANY

Yes ☒ No ☐  
Yes ☐ No ☒

State the aggregate market value of the voting and non-voting common equity held by non-affiliates, computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of each registrant's most recently completed second fiscal quarter:

PINNACLE WEST CAPITAL CORPORATION  
ARIZONA PUBLIC SERVICE COMPANY

\$3,673,440,593 as of June 30, 2004  
\$0 as of June 30, 2004

The number of shares outstanding of each registrant's common stock as of March 14, 2005

PINNACLE WEST CAPITAL CORPORATION  
ARIZONA PUBLIC SERVICE COMPANY

92,080,964 shares  
Common Stock, \$2.50 par value, 71,264,947 shares. Pinnacle West Capital Corporation is the sole holder of Arizona Public Service Company's Common Stock.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of Pinnacle West Capital Corporation's definitive Proxy Statement relating to its Annual Meeting of Shareholders to be held on May 18, 2005 are incorporated by reference into Part III hereof.

Arizona Public Service Company meets the conditions set forth in General Instruction I(1)(a) and (b) of Form 10-K and is therefore filing this form with the reduced disclosure format allowed under that General Instruction.

This combined Form 10-K is separately filed by Pinnacle West Capital Corporation and Arizona Public Service Company. Each registrant is filing on its own behalf all of the information contained in this Form 10-K that relates to such registrant. Neither registrant is filing any information that does not relate to such registrant, and therefore makes no representation as to any such information.

**PINNACLE WEST CAPITAL CORPORATION**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

credit. The current lines mature in October 2007. Pinnacle West had no outstanding borrowings at December 31, 2004 and December 31, 2003. Pinnacle West had approximately \$13 million of letters of credit issued under the line at December 31, 2004 and approximately \$15 million of letters of credit issued under the line at December 31, 2003. The commitment fees were 0.175% in 2004 and ranged from 0.125% to 0.175% in 2003. Pinnacle West had no commercial paper borrowings outstanding at December 31, 2004 and 2003. All APS and Pinnacle West bank lines of credit and commercial paper agreements are unsecured.

SunCor had revolving lines of credit totaling \$90 million at December 31, 2004 and \$120 million at December 31, 2003. The commitment fees were 0.125% in 2004 and 2003. SunCor had \$35 million outstanding at December 31, 2004 and \$50 million outstanding at December 31, 2003. The weighted-average interest rate was 4.50% at December 31, 2004 and 2003. Interest for 2004 and 2003 was based on LIBOR plus 2% or prime plus 0.5%. The balance is included in short-term debt on the Consolidated Balance Sheets. SunCor had other short-term loans in the amount of \$36 million at December 31, 2004 and December 31, 2003. These loans are made up of multiple notes primarily with variable interest rates based on LIBOR plus 2.5% at December 31, 2004 and 2003.

**6. Long-Term Debt**

APS has retired all first mortgage bonds issued under its 1946 mortgage and deed of trust, including the first mortgage bonds securing APS senior notes. On April 30, 2004, APS terminated its mortgage and deed of trust and, as a result, is not able to issue any additional first mortgage bonds under that mortgage. SunCor's short and long-term debt is collateralized by interests in certain real property and Pinnacle West's debt is unsecured. The following table presents the components of long-term debt on the Consolidated Balance Sheets outstanding at December 31, 2004 and 2003 (dollars in thousands):

**PINNACLE WEST CAPITAL CORPORATION**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

			December 31,	
	<u>Maturity Dates (a)</u>	<u>Interest Rates</u>	<u>2004</u>	<u>2003</u>
<b>APS</b>				
First mortgage bonds (b)	2004	6.625%	\$ --	\$ 80,000
First mortgage bonds (c)	2028	5.50%	--	25,000
First mortgage bonds (d)	2028	5.875%	--	154,000
Unamortized discount and premium			(7,968)	(8,631)
Pollution control bonds (e)	2024-2034	(f)	565,860	386,860
Pollution control bonds with senior notes	2029	5.05%	90,000	90,000
Unsecured notes (g)	2004	5.875%	--	125,000
Unsecured notes	2005	6.25%	100,000	100,000
Unsecured notes	2005	7.625%	300,000	300,000
Unsecured notes	2011	6.375%	400,000 <sup>A3</sup>	400,000
Unsecured notes	2012	6.50%	375,000 <sup>A4</sup>	375,000
Unsecured notes	2033	5.625%	200,000 <sup>A7</sup>	200,000
Unsecured notes	2015	4.650%	300,000 <sup>A6</sup>	300,000
Unsecured notes (h)	2014	5.80%	300,000 <sup>A5</sup>	--
Secured note	2014	6.00%	1,900	--
Senior notes (i)	2006	6.75%	83,695 <sup>A2</sup>	83,695
Capitalized lease obligations	2006-2012	(j)	9,854	11,749
Subtotal			<u>2,718,341</u>	<u>2,622,673</u>
<b>SUNCOR</b>				
Notes payable	2006-2008	(k)	15,467	17,125
Capitalized lease obligations	2005-2007	8.91%	507	728
Subtotal			<u>15,974</u>	<u>17,853</u>
<b>PINNACLE WEST</b>				
Senior notes (l)	2006	6.40%	302,589 <sup>A1</sup>	515,000
Unamortized discount and premium			(143)	(270)
Floating rate senior notes	2005	(m)	165,000	165,000
Capitalized lease obligations	2005-2007	5.45%	389	1,243
Subtotal			<u>467,835</u>	<u>680,973</u>
Total long-term debt (n)			<u>3,202,150</u>	<u>3,321,499</u>
Less current maturities (n)			<u>617,165</u>	<u>704,914</u>
<b>TOTAL LONG-TERM DEBT LESS CURRENT MATURITIES</b>			<b>\$2,584,985</b>	<b>\$2,616,585</b>

- (a) This schedule does not reflect the timing of redemptions that may occur prior to maturity.
- (b) On March 1, 2004, APS redeemed at maturity \$80 million of its First Mortgage Bonds, 6.625% Series due 2004.
- (c) On March 31, 2004, APS redeemed \$25 million of its First Mortgage Bonds, 5.5% Series due 2028.
- (d) On March 31, 2004, APS redeemed \$154 million of its First Mortgage Bonds, 5.875% Series due 2028.
- (e) On March 31, 2004, Navajo County, Arizona Pollution Control Corporation issued \$166 million of variable interest rate pollution control bonds, 2004 Series A-E, due 2034. The bonds were issued to refinance \$166 million of outstanding pollution control bonds. The refinanced bonds were all \$25 million of the Navajo 5.50% bonds due 2028 (see (c) above) and \$141 million of the Navajo 5.875% bonds due 2028 (see (d) above). The Series A-E

**PINNACLE WEST CAPITAL CORPORATION**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

- bonds are payable solely from revenues obtained from APS pursuant to a loan agreement between APS and Navajo County, Arizona Pollution Control Corporation. Also on March 31, 2004, Coconino County, Arizona Pollution Control Corporation issued \$13 million of variable interest rate pollution control bonds, 2004 Series A, due 2034. The bonds were issued to refinance \$13 million of outstanding pollution control bonds. The refinanced bonds were \$13 million of the Coconino 5.875% bonds due 2028 (see (d) above). The Series A bonds are payable solely from revenues obtained from APS pursuant to a loan agreement between APS and Coconino County, Arizona Pollution Control Corporation.
- (f) The weighted-average rate was 1.89% at December 31, 2004 and 1.51% at December 31, 2003. Changes in short-term interest rates would affect the costs associated with this debt.
  - (g) On February 15, 2004, APS redeemed at maturity \$125 million of its 5.875% Notes due 2004.
  - (h) On June 29, 2004, APS issued \$300 million of 5.80% senior unsecured notes due June 30, 2014. The proceeds from the sale of the notes were used to redeem \$100 million in aggregate principal amount of APS' 6.25% Notes due January 15, 2005 and a portion of \$300 million in aggregate principal amount of APS' 7.625% Notes due August 1, 2005.
  - (i) Through April 30, 2004, APS had outstanding \$84 million of first mortgage bonds (senior note mortgage bonds) issued to the senior note trustee as collateral for the senior notes, as well as the \$90 million issue due in 2029. The senior note mortgage bonds had the same interest rate, interest payment dates, maturity and redemption provisions as the senior notes. As long as the senior note mortgage bonds secured the senior notes, the senior notes effectively ranked equally with the first mortgage bonds. On April 30, 2004, when APS repaid all of its first mortgage bonds, other than those that secure senior notes, the senior note mortgage bonds were released from the senior note indenture, resulting in their no longer securing the senior notes and ceasing to be outstanding.
  - (j) The weighted average rate was 5.78% at December 31, 2004 and 5.55% at December 31, 2003. Capital leases are included in property, plant and equipment on the Consolidated Balance Sheets for both December 31, 2004 and December 31, 2003.
  - (k) Multiple notes with variable interest rates based on the lenders' prime plus 0.25%, lenders' prime plus 1.75% and LIBOR plus 2.50%. There are also two notes at fixed rates of 8.00% and 10.00%.
  - (l) On January 29, 2004, we entered into a fixed-for-floating interest rate swap transaction on the \$300 million 6.40% senior note. The transaction qualifies as a fair value hedge under SFAS No. 133.
  - (m) The weighted average rate was 2.06% at December 31, 2004 and 1.98% at December 31, 2003.
  - (n) \$281 million of pollution control bonds at December 31, 2003 have been reclassified from long-term to current maturities. The bond holders had the ability to put these bonds to APS in the short-term on the interest rate reset date. Without a demonstrated intent to finance on a long-term basis (by use of credit agreements that extend for more than one year, etc.), GAAP requires the classification of the obligations as current maturities.

Pinnacle West's and APS' debt covenants related to their respective bank financing arrangements include a debt-to-total-capitalization ratio and an interest coverage test. Pinnacle West and APS comply with these covenants and each anticipates it will continue to meet those and other significant covenant requirements. These covenants require that the ratio of debt to total capitalization cannot exceed 65% for the Company and for APS. At December 31, 2004, the ratio was approximately 53% for Pinnacle West and 54% for APS. The provisions regarding interest



**PINNACLE WEST CAPITAL CORPORATION**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

coverage require a minimum cash coverage of two times the interest requirements for each of the Company and APS. Based on 2004 results, the coverages were approximately 4 times for the Company and 4 times for APS. Failure to comply with such covenant levels would result in an event of default which, generally speaking, would require the immediate repayment of the debt subject to the covenants.

Neither Pinnacle West's nor APS' financing agreements contain "ratings triggers" that would result in an acceleration of the required interest and principal payments in the event of a ratings downgrade. However, in the event of a ratings downgrade, Pinnacle West and/or APS may be subject to increased interest costs under certain financing agreements.

All of Pinnacle West's bank agreements contain "cross-default" provisions that would result in defaults and the potential acceleration of payment under these loan agreements if Pinnacle West or APS were to default under other agreements. All of APS' bank agreements contain cross-default provisions that would result in defaults and the potential acceleration of payment under these bank agreements if APS were to default under other agreements. Pinnacle West's and APS' credit agreements generally contain provisions under which the lenders could refuse to advance loans in the event of a material adverse change in our financial condition or financial prospects, except that Pinnacle West and APS do not have a material adverse change restriction for revolver borrowings equal to outstanding commercial paper amounts.

The following is a list of principal payments due on Pinnacle West's total long-term debt and capitalized lease requirements:

- \$618 million in 2005;
- \$398 million in 2006;
- \$174 million in 2007;
- \$7 million in 2008;
- \$1 million in 2009; and
- \$2,012 million, thereafter.

**7. Common Stock and Treasury Stock**

Our common stock and treasury stock activity during each of the three years 2004, 2003 and 2002 is as follows (dollars in thousands):

PINNACLE WEST CAPITAL CORPORATION



EVERY TIME  
*This Light Blinks...*

... 2004 ANNUAL REPORT ...

## 6. LONG-TERM DEBT

APS has retired all first mortgage bonds issued under its 1946 mortgage and deed of trust, including the first mortgage bonds securing APS senior notes. On April 30, 2004, APS terminated its mortgage and deed of trust and, as a result, is not able to issue any additional first mortgage bonds under that mortgage. SunCor's short and long-term debt is collateralized by interests in certain real property and Pinnacle West's debt is unsecured. The following table presents the components of long-term debt on the Consolidated Balance Sheets outstanding at December 31, 2004 and 2003 (dollars in thousands):

			December 31,	
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Unamortized discount and premium			(7,968)	(8,631)
Pollution control bonds (e)	2024-2034	(f)	565,860	386,860
Pollution control bonds with senior notes	2029	5.05%	90,000	90,000
Unsecured notes (g)	2004	5.875%	-	125,000
Unsecured notes	2005	6.25%	100,000	100,000
Unsecured notes	2005	7.625%	300,000	300,000
Unsecured notes	2011	6.375%	400,000 A3	400,000
Unsecured notes	2012	6.50%	375,000 A4	375,000
Unsecured notes	2033	5.625%	200,000 A7	200,000
Unsecured notes	2015	4.650%	300,000 A6	300,000
Unsecured notes (h)	2014	5.80%	300,000 A5	-
Secured note	2014	6.00%	1,900	-
Senior notes (i)	2006	6.75%	83,695 A2	83,695
Capitalized lease obligations	2006-2012	(j)	9,854	11,749
Subtotal			2,718,341	2,622,673
SUNCOR				
Notes payable	2006-2008	(k)	15,467	17,125
Capitalized lease obligations	2005-2007	8.91%	507	728
Subtotal			15,974	17,853
PINNACLE WEST				
Senior notes (l)	2006	6.40%	302,589 A1	515,000
Unamortized discount and premium			(143)	(270)
Floating rate senior notes	2005	(m)	165,000	165,000
Capitalized lease obligations	2005-2007	5.45%	389	1,243
Subtotal			467,835	680,973
Total long-term debt (n)			3,202,150	3,321,499
Less current maturities (n)			617,165	704,914
TOTAL LONG-TERM DEBT LESS				
CURRENT MATURITIES			\$ 2,584,985	\$ 2,616,585

(a) This schedule does not reflect the timing of redemptions that may occur prior to maturity.

(b) On March 1, 2004, APS redeemed at maturity \$80 million of its First Mortgage Bonds, 6.625% Series due 2004.

(c) On March 31, 2004, APS redeemed \$25 million of its First Mortgage Bonds, 5.5% Series due 2028.

(d) On March 31, 2004, APS redeemed \$154 million of its First Mortgage Bonds, 5.875% Series due 2028.

(e) On March 31, 2004, Navajo County, Arizona Pollution Control Corporation issued \$166 million of variable interest rate pollution control bonds, 2004 Series A-E, due 2034. The bonds were issued to refinance \$166 million of outstanding pollution control bonds. The refinanced bonds were all \$25 million of the Navajo 5.50% bonds due 2028 (see (c) above) and \$141 million of the Navajo 5.875% bonds due 2028 (see (d) above). The Series A-E bonds are payable solely from revenues obtained from APS pursuant to a loan agreement between APS and Navajo County, Arizona Pollution Control Corporation. Also on March 31, 2004, Coconino County, Arizona Pollution Control Corporation issued \$13 million of variable interest rate pollution control bonds, 2004 Series A, due 2034. The bonds were issued to refinance \$13 million of outstanding pollution control bonds. The refinanced bonds were \$13 million of the Coconino 5.875% bonds due 2028 (see (d) above). The Series A bonds are payable solely from revenues obtained from APS pursuant to a loan agreement between APS and Coconino County, Arizona Pollution Control Corporation.

## 64 Consolidated Financial Information

- (f) The weighted-average rate was 1.89% at December 31, 2004 and 1.51% at December 31, 2003. Changes in short-term interest rates would affect the costs associated with this debt.
- (g) On February 15, 2004, APS redeemed at maturity \$125 million of its 5.875% Notes due 2004.
- (h) On June 29, 2004, APS issued \$300 million of 5.80% senior unsecured notes due June 30, 2014. The proceeds from the sale of the notes were used to redeem \$100 million in aggregate principal amount of APS' 6.25% Notes due January 15, 2005 and a portion of \$300 million in aggregate principal amount of APS' 7.625% Notes due August 1, 2005.
- (i) Through April 30, 2004, APS had outstanding \$84 million of first mortgage bonds (senior note mortgage bonds) issued to the senior note trustee as collateral for the senior notes, as well as the \$90 million issue due in 2029. The senior note mortgage bonds had the same interest rate, interest payment dates, maturity and redemption provisions as the senior notes. As long as the senior note mortgage bonds secured the senior notes, the senior notes effectively ranked equally with the first mortgage bonds. On April 30, 2004, when APS repaid all of its first mortgage bonds, other than those that secure senior notes, the senior note mortgage bonds were released from the senior note indenture, resulting in their no longer securing the senior notes and ceasing to be outstanding.
- (j) The weighted average rate was 5.78% at December 31, 2004 and 5.55% at December 31, 2003. Capital leases are included in property, plant and equipment on the Consolidated Balance Sheets for both December 31, 2004 and December 31, 2003.
- (k) Multiple notes with variable interest rates based on the lenders' prime plus 0.25%, lenders' prime plus 1.75% and LIBOR plus 2.50%. There are also two notes at fixed rates of 8.00% and 10.00%.
- (l) On January 29, 2004, we entered into a fixed-for-floating interest rate swap transaction on the \$300 million 6.40% senior note. The transaction qualifies as a fair value hedge under SFAS No. 133.
- (m) The weighted average rate was 2.06% at December 31, 2004 and 1.98% at December 31, 2003.
- (n) \$281 million of pollution control bonds at December 31, 2003 have been reclassified from long-term to current maturities. The bond holders had the ability to put these bonds to APS in the short-term on the interest rate reset date. Without a demonstrated intent to finance on a long-term basis (by use of credit agreements that extend for more than one year, etc.), GAAP requires the classification of the obligations as current maturities.

Pinnacle West's and APS' debt covenants related to their respective bank financing arrangements include a debt-to-total-capitalization ratio and an interest coverage test. Pinnacle West and APS comply with these covenants and each anticipates it will continue to meet those and significant covenant requirements. These covenants require that the ratio of debt to total capitalization cannot exceed 65% for the Company and for APS. At December 31, 2004, the ratio was approximately 53% for Pinnacle West and 54% for APS. The provisions regarding interest coverage require a minimum cash coverage of two times the interest requirements for each of the Company and APS. Based on 2004 results, the coverages were approximately 4 times for the Company and 4 times for APS. Failure to comply with such covenant levels would result in an event of default which, generally speaking, would require the immediate repayment of the debt subject to the covenants.

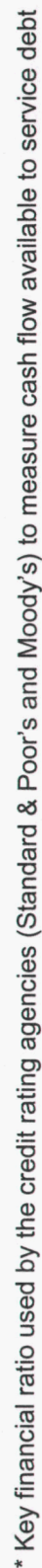
Neither Pinnacle West's nor APS' financing agreements contain "ratings triggers" that would result in an acceleration of the required interest and principal payments in the event of a ratings downgrade. However, in the event of a ratings downgrade, Pinnacle West and/or APS may be subject to increased interest costs under certain financing agreements.

All of Pinnacle West's bank agreements contain "cross-default" provisions that would result in defaults and the potential acceleration of payment under these loan agreements if Pinnacle West or APS were to default under other agreements. All of APS' bank agreements contain cross-default provisions that would result in defaults and the potential acceleration of payment under these bank agreements if APS were to default under other agreements. Pinnacle West's and APS' credit agreements generally contain provisions under which the lenders could refuse to advance loans in the event of a material adverse change in our financial condition or financial prospects, except that Pinnacle West and APS do not have a material adverse change restriction for revolver borrowings equal to outstanding commercial paper amounts.

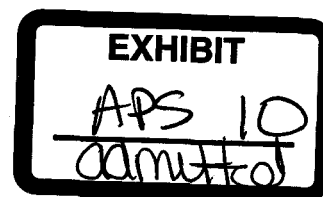
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- \$618 million in 2005;
- \$398 million in 2006;
- \$174 million in 2007;
- \$7 million in 2008;
- \$1 million in 2009; and
- \$2,012 million, thereafter.

EXHIBIT  
APS 9  
admitted



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549



FORM 8-K

CURRENT REPORT  
Pursuant to Section 13 or 15(d) of the  
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): March 6, 2006

Commission File Number	Exact Name of Registrant as Specified in Charter; State of Incorporation; Address and Telephone Number	IRS Employer Identification Number
1-8962	Pinnacle West Capital Corporation (an Arizona corporation) 400 North Fifth Street, P.O. Box 53999 Phoenix, AZ 85072-3999 (602) 250-1000	86-0512431
1-4473	Arizona Public Service Company (an Arizona corporation) 400 North Fifth Street, P.O. Box 53999 Phoenix, AZ 85072-3999 (602) 250-1000	86-0011170

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17CFR 230.425)
- ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

This combined Form 8-K is separately filed by Pinnacle West Capital Corporation and Arizona Public Service Company. Each registrant is filing on its own behalf all of the information contained in this Form 8-K that relates to such registrant and, where required, its subsidiaries. Except as stated in the preceding sentence, neither registrant is filing any information that does not relate to such registrant, and therefore makes no representation as to any such information.

## **Item 8.01. Other Events**

### **Palo Verde Nuclear Generating Station**

As previously reported, Arizona Public Service Company ("APS") has been operating Unit 1 of the Palo Verde Nuclear Generating Station ("Palo Verde") at reduced power levels since December 25, 2005 due to a non-safety related acoustic impact in one of the unit's shutdown cooling lines. See "Palo Verde Nuclear Generating Station" in Item 8.01 of the APS/Pinnacle West Capital Corporation ("Pinnacle West") Current Reports on Form 8-K filed on January 26, 2006 and February 24, 2006. Unit 1 is currently operating at approximately 25% power. APS has concluded after comprehensive analysis that the preferred solution will require Unit 1 to undergo an outage of approximately five weeks in order for APS to effect the necessary modifications to the Unit. APS anticipates that Unit 1 will begin this outage in the June timeframe. In addition, an outage for preparatory work of approximately one week, beginning March 18, 2006, will take place prior to this outage. This preferred solution was initially planned for installation in the spring of 2007.

APS estimates that, through February 28, 2006, Unit 1's reduced power level has resulted in incremental replacement power costs of approximately \$20 million after income taxes, approximately \$18 million of which has been incurred since January 1, 2006. Based on current forward market energy prices, APS estimates that (a) operating Unit 1 at reduced power levels until the assumed outage in the June timeframe will result in additional incremental replacement power costs of approximately \$25 million after income taxes and (b) the June Unit 1 outage will result in additional incremental replacement power costs of approximately \$15 million after income taxes. APS does not anticipate any material increase in Palo Verde operations and maintenance costs as a result of this issue.

In accordance with a power supply adjustor ("PSA") approved by the Arizona Corporation Commission (the "ACC") in 2005, APS defers for future rate recovery 90% of the difference between actual fuel and purchased power costs, net of off-system sales margins, and the amount for such costs currently included in base rates. Although APS defers actual fuel and purchased power costs on a current basis, APS' recovery of the deferrals from its ratepayers is subject to annual PSA adjustments and ACC approval of periodic surcharge applications. Based upon the estimates in the preceding paragraph, during 2006 APS expects to defer under the PSA approximately \$50 million after income taxes as a result of Unit 1's current situation.

### **Forward-Looking Statements**

This document contains forward-looking statements based on current expectations, and neither Pinnacle West nor APS assumes any obligation to update these statements or make any further statements on any of these issues, except as required by applicable law. These forward-looking statements are often identified by words such as "estimate," "predict," "hope," "may," "believe," "anticipate," "plan," "expect," "require," "intend," "assume" and similar words and include statements regarding (i) the timing and duration of the planned Unit 1 outage; (ii) the incremental purchased power and operations and maintenance costs associated with Unit 1's reduced power level and planned outage; and (iii) the amount of PSA deferrals resulting from Unit 1's current situation. Because actual results may differ materially from expectations, we caution readers not to place undue reliance on these statements. A number of factors could cause future results to differ materially from historical results, or from results or outcomes currently expected or sought by Pinnacle West or APS. These factors include, but are not limited to, (a) increased prices for purchased power; (b) unanticipated technical or operational issues associated with Unit 1's current situation; (c) unanticipated increased costs associated with Unit 1's current situation or the planned outage; and (d) the possibility that the ACC may not permit APS to fully recover the PSA deferrals resulting from Unit 1's current situation.

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, each registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

PINNACLE WEST CAPITAL CORPORATION  
(Registrant)

Dated: March 7, 2006

By: /s/ Barbara M. Gomez  
Barbara M. Gomez  
Vice President and Treasurer

ARIZONA PUBLIC SERVICE COMPANY  
(Registrant)

Dated: March 7, 2006

By: /s/ Barbara M. Gomez  
Barbara M. Gomez  
Vice President and Treasurer



**ARIZONA PUBLIC SERVICE COMPANY**  
**APS Dividend as a Percent of Pinnacle West Dividend**  
*Dollars in Millions*

Dividends to Pinnacle West

	<u>2004</u>	<u>2005</u>	<b>Projected</b> <u>2006</u>
APS	\$ 170	\$ 170	\$ 170
Suncor	85	50	20
Total	<u>\$ 255</u>	<u>\$ 220</u>	<u>\$ 190</u>
APS Percentage	67%	77%	89%

**EXHIBIT**

APS - 11  
admitted

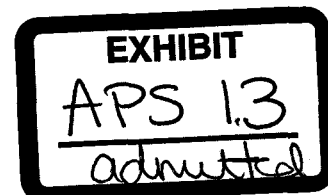
**APS' POSITION ON HISTORICAL TIMELINE OF THE  
POWER SUPPLY ADJUSTOR PLAN OF ADMINISTRATION**

- On August 14, 2004, a Settlement was filed in Docket No. E-01345A-03-0437. Paragraphs 32 and 135 of that Settlement required APS to submit a Plan of Administration for the Power Supply Adjustor ("PSA") within 60 days of a Commission order approving the Settlement. The Settlement did NOT require that the POA be approved by the Commissioners. Also, it should be noted that most adjustor mechanisms in Arizona and elsewhere do not have a POA. (For example, Southwest Gas does not have a POA.)
- On April 7, 2005, the ACC modified the above settlement in Decision No. 67744. One of those modifications was to require the Parties to the Settlement (including APS) to file the POA. Another modification of the Settlement by the ACC was to require that the POA be approved by the Commissioners.
- ACC Staff, acting on behalf of the Parties to the Settlement, timely filed a POA for the PSA on June 6, 2005. That POA, if approved by the Commissioners, would have allowed APS to submit a PSA surcharge request at any time after the effective date of the PSA, which was April 1, 2005.
- On July 25, 2005, ACC Staff filed a Staff Report recommending approval of the POA with some minor modifications to that POA filed on June 6, 2005. No party filed any exceptions to that Staff Report, which was scheduled to be considered at an ACC Open Meeting in early August of 2005.
- The July 25, 2005 Staff Report was pulled from the August Open Meeting, and the POA approval process was consolidated by the ACC on September 14, 2005 with APS PSA surcharge application that was filed on July 22, 2005.
- On October 17, 2005, ACC Staff filed a revised POA that added some additional definitions of terms, but which was not substantively different from that filed on June 6, 2005 or recommended by Staff on July 25, 2005. Again, no party objected to the POA.
- On February 2, 2006, in Decision No. 68437, the ACC rejected the POA and ordered a revised POA be filed by the Parties to the Settlement (including APS) within 30 days. Staff subsequently requested a two week extension, and the revised POA was filed by Staff on March 20, 2006.

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**DIRECT TESTIMONY OF PETER M. EWEN**  
**On Behalf of Arizona Public Service Company**  
**Docket No. E-01345A-06-0009**

**January 20, 2006**



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**DIRECT TESTIMONY OF PETER M. EWEN  
ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY  
(Docket No. E-01345A-06-0009)**

**I. INTRODUCTION**

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Peter M. Ewen. My business address is 400 N. 5<sup>th</sup> Street, Phoenix, Arizona, 85004.

**Q. WHAT IS YOUR POSITION WITH ARIZONA PUBLIC SERVICE COMPANY?**

A. I am Manager of the Revenue and Fuel Analysis and Forecasts Department for Arizona Public Service Company ("APS" or "Company"). In that role, I am responsible for preparing the Company's short-range and long-range forecasts of system peak demand and energy sales and projecting the optimal dispatch of available resources to minimize the cost of meeting those energy requirements.

**Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?**

A. I received Bachelors and Masters degrees in Economics from Arizona State University in 1985 and 1988, respectively. I have analyzed and forecasted electric energy and demand growth since 1988, first as a Staff member of the Arizona Corporation Commission ("Commission") and, since 1990, as an employee for APS. I have specifically analyzed the actual dispatch of our generating units in combination with market purchases to serve native load demand since 1998, and assumed full responsibility for making the optimal dispatch and associated fuel cost projections in 2000. I was formerly President of the Arizona Economic Round Table, a group of Arizona-based economists that specialize in studying the Arizona economy, and I am still a member of that

1 organization. I also serve on the Joint Legislative Budget Committee's Finance  
2 Advisory Committee. This consists of a group of state economists who advise  
3 the Joint Legislative Budget Committee staff on the adequacy of the economic  
4 projections underlying their state revenue projections.

5 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

6 **A.** My testimony sets forth the basis for the Company's requested interim base rate  
7 level of fuel and purchased power expenses of 3.1904 ¢/kWh. This is the same  
8 amount as I will be testifying to in the Company's updated rate case filing on  
9 January 31, 2006 using the twelve-months-ending September 30, 2005 as the  
10 Test Year. The requested interim base rate associated with this level is 14%  
11 greater than the Company's current base rates authorized in Decision No. 67744  
12 (April 7, 2005), and equates to an additional \$299 million in annual revenue.  
13 The Company's current base rates include a base fuel rate of 2.0743¢/kWh. I  
14 also discuss the Company's hedging program and its impact on these expenses,  
15 which is a net benefit to customers of \$169 million. Absent that benefit, the  
16 requested interim base fuel and purchased power rates would be 8% higher.

17  
18 **II. DISCUSSION**

19 **Q. WHAT ARE THE KEY TRENDS DRIVING THE INCREASE IN THE  
20 COMPANY'S BASE COST OF FUEL?**

21 **A.** APS' base fuel recovery amount of 2.0743 ¢/kWh established in Decision No.  
22 67744, which was based on 2003 cost levels, is not adequate to compensate for  
23 the fuel and purchased power market price changes since 2003. APS is therefore  
24 requesting an interim rate increase of \$299 million in additional electric  
25 revenues to allow the Company to recover continued increases in fuel and  
26 purchased power expenses. This amount was calculated by comparing the

1 amount currently recovered through base rates (2.0743¢/kWh) to the costs that  
2 the Company incurred during the twelve months ending September 30, 2005  
3 (the "historical period") (2.701¢/kWh) as adjusted to reflect 2006 conditions the  
4 Company is expected to experience during 2006 (3.1904¢/kWh) to meet the  
5 needs of its customers. Attachment PME-1 shows these changes in fuel costs.  
6 My testimony focuses on the reasons for those increased costs.

7  
8 The increasing costs that the Company is experiencing are the result of a number  
9 of factors, which are summarized in the following paragraphs.

- 10 • Incremental Sales Growth and Fuel Mix: APS has one of the  
11 fastest growing service territories in the country and growth is one  
12 of the dominant factors producing increased fuel and purchased  
13 power expenses. The Company's incremental sales attributable to  
14 growth must be met primarily with high-cost natural gas and  
15 purchased power (virtually all of which is derived from gas-fired  
16 generation). That incremental sales growth, therefore, is leading  
17 to a shift in the Company's fuel mix to a heavier emphasis on  
18 natural gas. This factor alone accounts for \$147 million of the  
19 requested interim rates increase.
- 20 • Natural Gas Prices: Natural gas prices have increased  
21 dramatically since 2003 and, coupled with purchased power price  
22 increases, are responsible for a \$330 million increase in the  
23 Company's base cost of fuel (prior to the results of our hedging  
24 program). The Company's current base fuel rate set in Decision  
25 No. 67744 incorporated natural gas prices of \$5.78/MMBTU.  
26 During the historical period, natural gas prices jumped to

1 \$7.20/MMBTU, an increase of 25%. At the close of the market on  
2 November 30, 2005, delivered natural gas prices for calendar year  
3 2006 averaged \$10.74/MMBTU, a further 49% increase over the  
4 historical period and 86% over the level included in the current  
5 base fuel rate. Attachment PME-4 shows the historical transaction  
6 prices for 2006 natural gas contracts at Henry Hub.

- 7 • Purchased Power Prices: Prices for purchased power (most of  
8 which comes from natural gas generation) also increased  
9 significantly over the same time periods. The base rate set in  
10 Decision No. 67744 incorporates a purchased power price of  
11 \$43.37/MWh, while the average price incurred by the Company  
12 during the historical period was \$57.50/MWh, a 33% increase. On  
13 November 30, 2005, purchased power prices were anticipated to  
14 average \$87.56/MWh during 2006, an increase of 52% over the  
15 historical period and 102% over the level included in the current  
16 base fuel rate. Attachment PME-5 shows the historical transaction  
17 prices for 2006 on-peak power contracts at Palo Verde, and the  
18 similarity to the gas market is plainly evident.

- 19 • Coal Prices: Although the dramatic increase in prices for natural  
20 gas and purchased power, when combined with the significant  
21 growth that the Company is dealing with, represents the largest  
22 component of the requested interim rate increase, prices for coal  
23 resources also are increasing. Coal prices increased 13% between  
24 2003 and the historical period and are projected to increase an  
25 additional 6% in 2006. Cumulatively, higher coal prices have  
26 raised the Company's base cost of fuel by \$34 million.



1           •     Hedging: As discussed above, coal prices, natural gas prices and  
2                     power prices all increased during the historical period. APS's  
3                     request would have been significantly higher absent the results of  
4                     the Company's commodity hedging program. All of the price  
5                     increases discussed above rolled together would have amounted to  
6                     an increased fuel expense of approximately \$364 million — \$330  
7                     million for gas and power and \$34 million for coal. The  
8                     Company, however, was able to reduce fuel expense by more than  
9                     \$169 million through its hedging program. By the end of August  
10                    2005, the Company had hedged 85% of its 2006 gas and power  
11                    requirements. The vast majority of these contracts are at prices  
12                    significantly below recent market prices and, valued at November  
13                    30, 2005, will save the Company and its customers almost  
14                    \$2.50/MMBTU on the effective gas price incurred in 2006.

15           The following table summarizes these results:

16           Incremental Sales Growth	\$ 147 million
17           Natural Gas and Power Prices	\$ 330 million
18           Coal Prices	\$ 34 million
19           Hedge Value	\$ (169) million
20           All Other Items	\$ (43) million
21           Total of All Changes	\$ 299 million

22           Attachment PME-1 quantifies the impact of these key factors on the Company's  
23           fuel cost trends. Attachment PME-2 shows graphically the differential in costs  
24           for the Company's various resources and the changes in those costs over time.  
25           One can plainly see the impact that a changing fuel mix toward natural gas and  
26

1 wholesale market purchases and rising prices across all fuel resources will have  
2 on the Company's costs. Attachment PME-3 provides the values of the key  
3 factors that contribute most to those costs.

4 In light of the above factors, it is easy to see why the Company has requested an  
5 increase in the Base Fuel Recovery Amount in Docket No. E-01345A-05-0816.  
6 I am proposing that the Base Fuel Recovery amount be set at 3.1904 ¢/kWh,  
7 subject to adjustment, if necessary, through the Company's pending rate case.  
8 That amount reflects expected 2006 fuel and purchased power prices and  
9 corresponding hedging results and includes a credit for anticipated off system  
10 sales margins and the effects of adding the Sundance units to the APS system.

11  
12 **Q. PLEASE EXPLAIN THE METHODOLOGY YOU USED TO DEVELOP**  
13 **THE ADJUSTMENTS TO THE BASE FUEL RATE YOU DISCUSSED**  
14 **ABOVE.**

15 A. The method employed in calculating the new base fuel rate I propose above is  
16 identical to the method used to calculate the Company's current base fuel rate  
17 and accepted by the Commission in Decision No. 67744. The impacts of  
18 increased sales levels, higher fuel prices and other normalizing adjustments have  
19 been simulated using the Company's production cost simulation tool RTSim.  
20 This computer model replicates the dispatch of the APS system and is the  
21 primary fuel expense and off-system sales forecasting tool used by the Company  
22 in preparing its annual budgets, long range fuel forecasts, and near-term  
23 operational plans. The input factors I have used in both this docket and in  
24 Docket No. E-01345A-05-0816 are the same as or consistent with the expected  
25 levels in the Company's 2005 Long Range Forecast ("LRF") for the year 2006,  
26 the 2006 Sales Budget, with appropriate customer annualizations, and the  
November 30, 2005 forward curve for natural gas and power prices and the

1 corresponding valuation of the Company's hedges. This approach is entirely  
2 consistent with the method used by the Company and accepted by the  
3 Commission for establishing the Company's Base Fuel Rate in Decision No.  
4 67744.

5 **Q. HOW DOES THE PRODUCTION COST SIMULATION MODEL**  
6 **CALCULATE THE AVERAGE FUEL AND PURCHASED POWER**  
7 **COST?**

8 A. The model simulates the dispatch of the APS generating units on a daily and  
9 hourly basis. It takes into account the APS system load shape, fuel prices  
10 (including wholesale market prices for power) and characteristics of APS owned  
11 generating plants (such as heat rates, overhaul cycles, unplanned outage rates,  
12 start-up costs and ramp rates, among others), along with commitments for  
13 purchases and sales of power. The model also simulates necessary market  
14 purchases for those times when load exceeds generating capacity, and likewise  
15 simulates market sales during those times when the system is not fully utilized  
16 but generating units are economic (or "in-the-money").

17 The projected hourly dispatch of each of the units, along with the wholesale  
18 market purchases and sales, are priced out at the corresponding contract or  
19 market price projections included in the model. Fixed costs – those expenses  
20 that do not vary with the level of production – are then added to the model  
21 results. The result is the total expected fuel expense and off-system sales  
22 revenue consistent with the assumptions used in the model.

23 **Q. HAVE YOU NORMALIZED POWER PLANT UNPLANNED OUTAGE**  
24 **TIME IN THIS PROCESS?**

25 A. Yes. Attachment PME-6 shows the comparison of normalized unplanned outage  
26 time, expressed as EFOR, to the historical rates experienced by the Company's

1 plants. This means, for example, that I have used an EFOR of 2.5% for the Palo  
2 Verde units rather than the actual 2005 EFOR of 8.8%.

3 **III. CONCLUSION**

4 **Q. DO YOU HAVE ANY FINAL REMARKS?**

5 A. The run up in natural gas and purchased power prices over the last several years  
6 has been well documented. Those increased prices are anticipated to persist into  
7 the future. Because the vast majority of the Company's incremental load growth  
8 is served by natural gas (either through the operation of the Company's own  
9 generating facilities or through purchased power), the Company's fuel expense  
10 has increased dramatically since 2003, the year used to set the base fuel amount  
11 currently in effect. Because these amounts clearly are necessary expenditures  
12 required to meet APS' customers' needs, the base fuel amount should be  
13 adjusted, on an interim basis, accordingly.

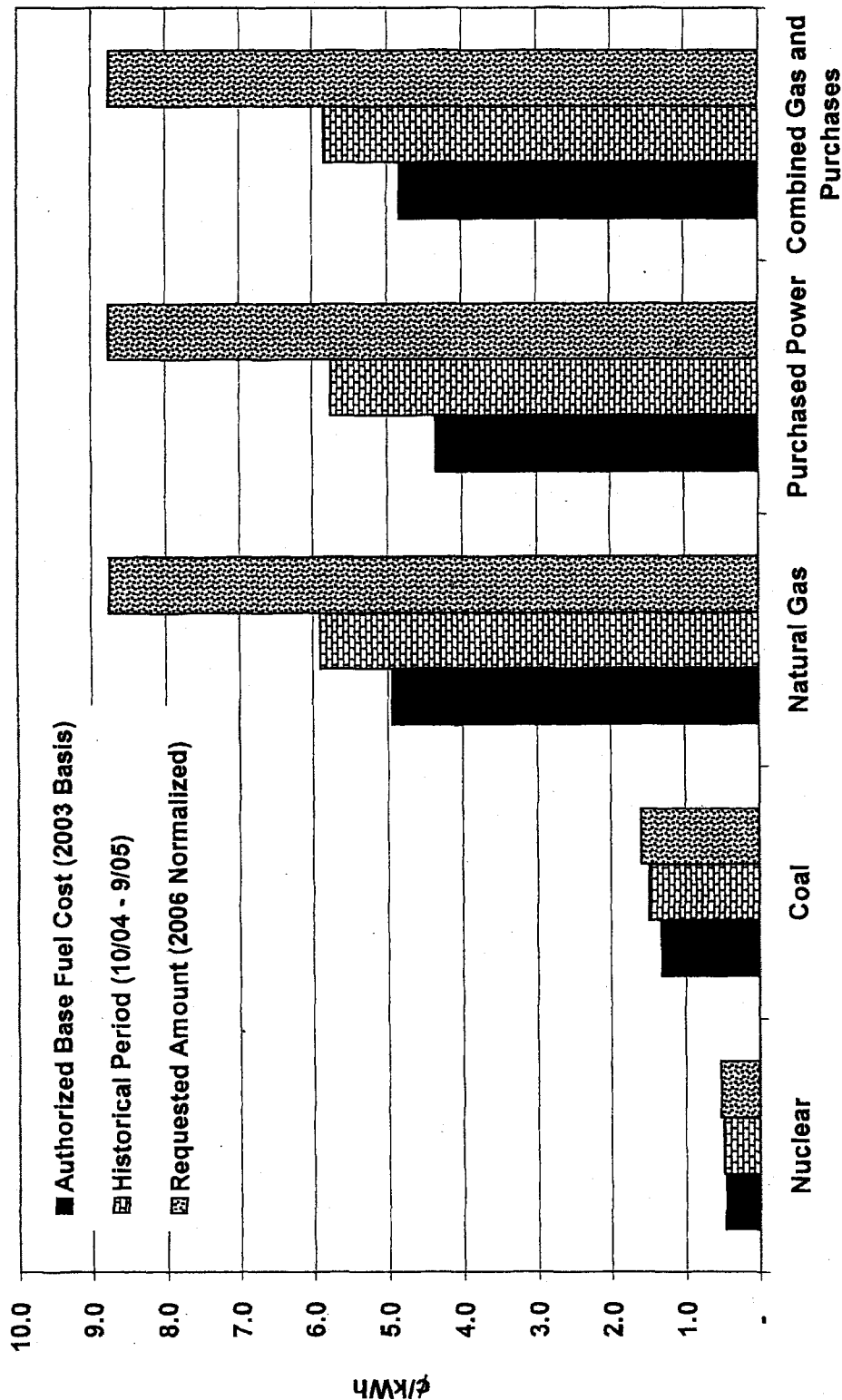
14  
15 **Q. DOES THIS CONCLUDE YOUR PREFILED DIRECT TESTIMONY IN  
16 THIS PROCEEDING?**

17 A. Yes.  
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**Arizona Public Service Company**  
**Summary of Base Fuel Cost Changes**

	Current Authorized Level (2003 Conditions)	Historical Period Level (12ME 9/30/05)	Historical Period vs. Current Authorized	Requested Level (2006 Conditions)	Requested vs. Historical Period	Requested vs. Current Authorized
Base Fuel Cost (\$/kWh)	2,074.3	2,701.0	0.6267	3,190.4	0.4894	1,116.1
Historical Period Normalized Sales (GWh)	26,759	26,759		26,759		
Base Fuel Expense (\$000,000)	555.1	722.8	167.7	853.7	131.0	298.7
<b>Reasons for Change (\$000,000)</b>						
Increased Share of Natural Gas, Market Purchased Power			59.5		87.5	147.1
Prices for Natural Gas, Purchased Power			94.0		235.6	329.6
Value of Gas and Power Hedge Contracts			(70.5)		(98.7)	(169.2)
Net Effective Price of Natural Gas, Purchased Power			23.5		136.9	160.4
Coal Average Fuel Cost			21.9		11.9	33.8
PWEC Bridge PPA			53.6		(53.6)	-
All Other			9.2		(51.7)	(42.5)
Total			167.7		131.0	298.7

# Average Fuel Cost by Type of Resource



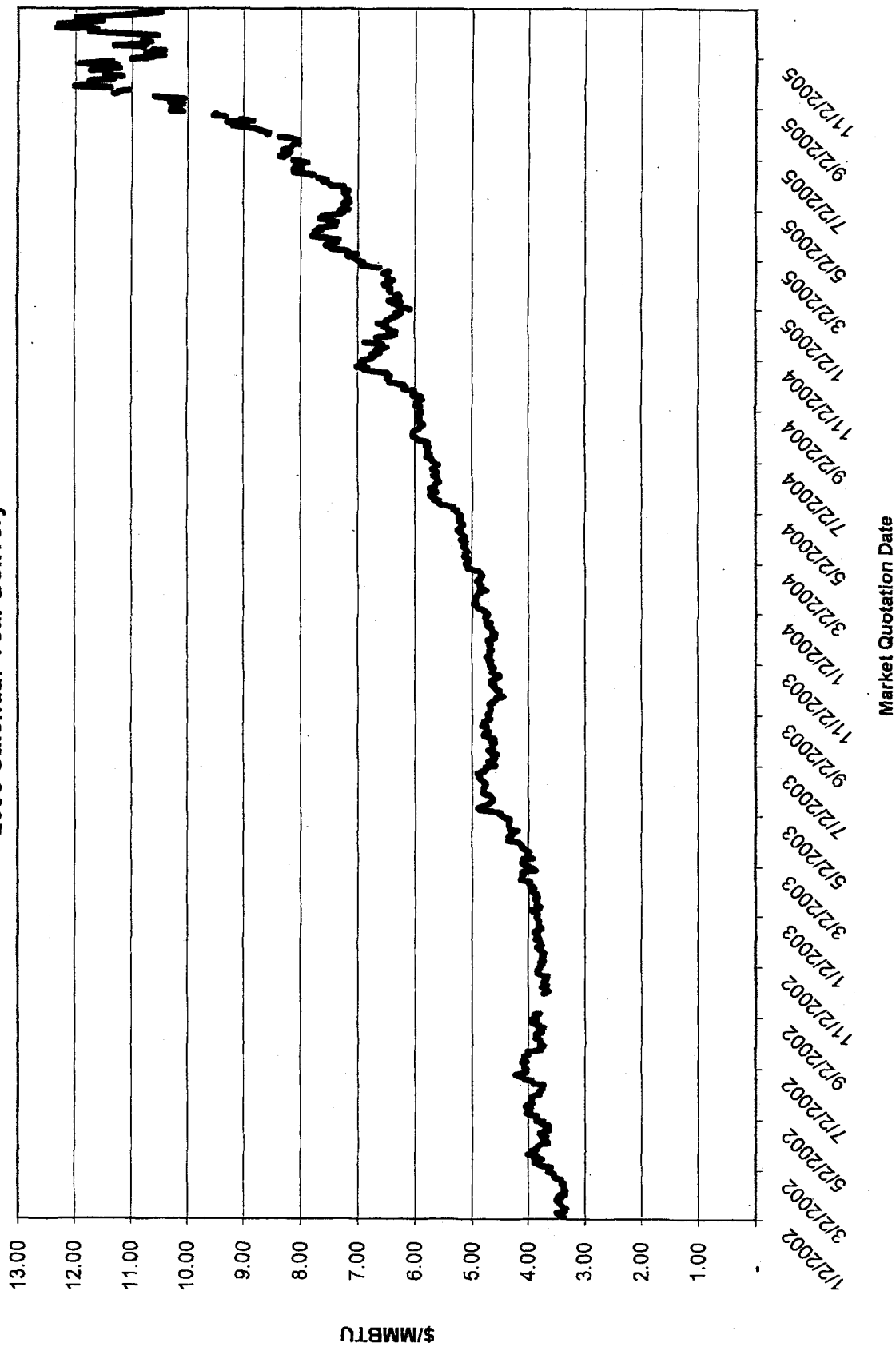
# ARIZONA PUBLIC SERVICE COMPANY

## SUMMARY OF KEY FACTORS IN INTERIM RATE REQUEST

ATTACHMENT PME-3

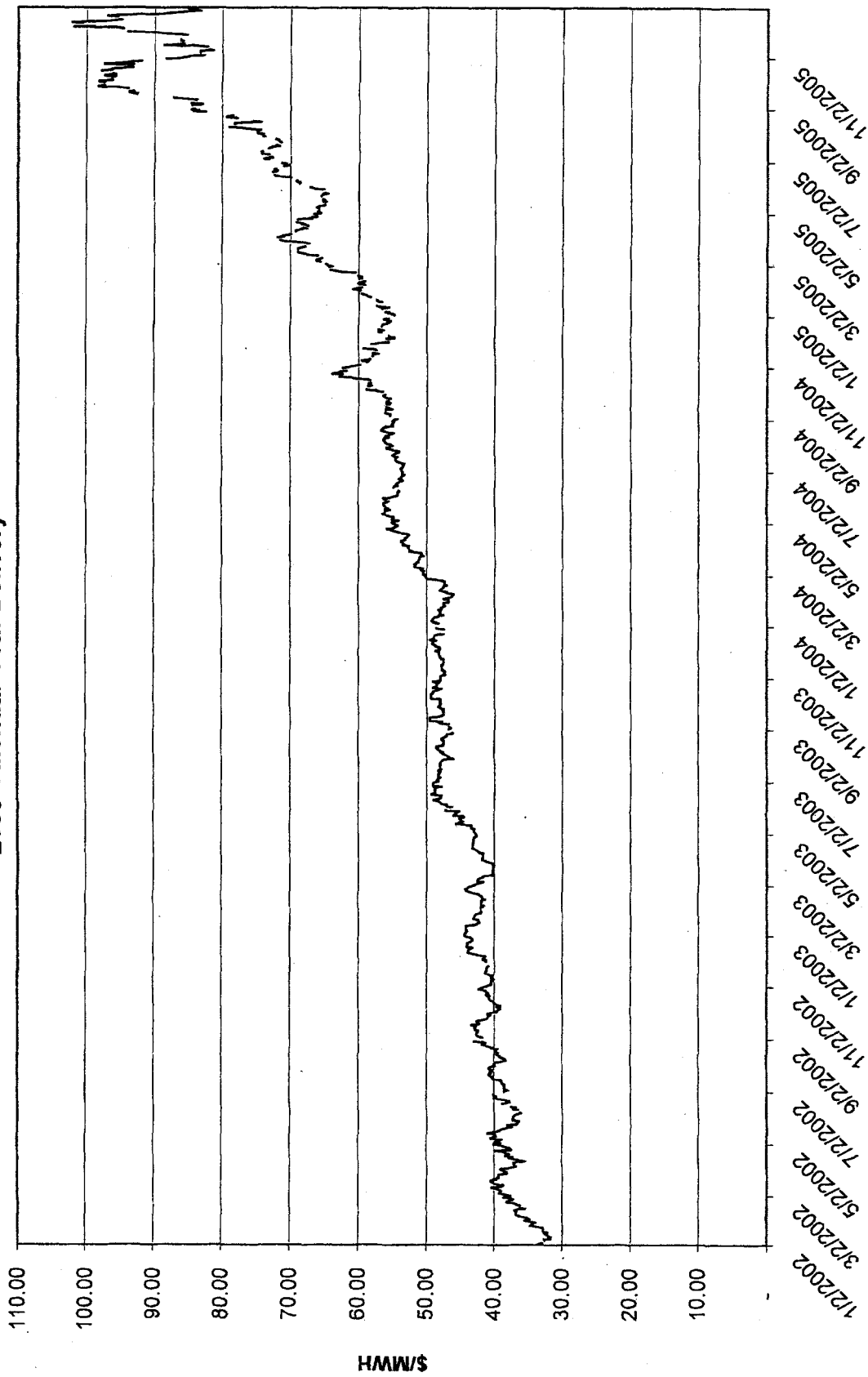
	2003 <u>Authorized</u>	TME <u>9/30/2005</u>	Requested <u>2006 Normalized</u>
Gas and Purchased Power Share of Native Load Energy	22.4%	28.3%	28.6%
<b>Gas Prices</b>			
Delivered (\$/mmbtu)	5.78	7.20	10.74
Hedge Value (\$/mmbtu)	-	(1.68)	(2.48)
Effective Gas Price (\$/mmbtu)	<u>5.78</u>	<u>5.52</u>	<u>8.26</u>
<b>Power Prices</b>			
Palo Verde On-Peak (\$/MWh)	53.21	58.75	88.88
Average Purchase Cost (\$/MWh)	43.37	57.50	87.56
Average Coal Cost (\$/MWh)	13.19	14.96	15.91
Average Nuclear Cost (\$/MWh)	4.58	4.81	5.24

Attachment PME-4  
Historical Transaction Prices for Forward Natural Gas Contracts at Henry Hub  
2006 Calendar Year Delivery





Attachment PME-5  
Historical Transaction Prices for Forward On-Peak Power Contracts at Palo Verde  
2006 Calendar Year Delivery



# Arizona Public Service Company

ATTACHMENT PME-6

## Comparison of Historical EFOR to Normalized EFOR

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>5 Year Average</u>	<u>Normalized EFOR</u>
Nuclear	1.3%	0.9%	2.4%	8.0%	8.8%	4.3%	2.5%
Four Corners	11.2%	10.8%	8.8%	7.0%	10.1%	9.6%	9.1%
Cholla	11.5%	5.0%	22.4%	2.6%	2.3%	8.8%	5.7%
Navajo	3.7%	3.2%	3.5%	2.1%	4.6%	3.4%	5.3%
West Phoenix CC1-3	5.3%	5.3%	5.3%	5.3%	7.0%	5.6%	7.0%
West Phoenix CC4		4.0%	1.5%	11.6%	36.3%	13.4%	7.0%
West Phoenix CC5			7.5%	11.7%	6.5%	8.6%	10.0%
Redhawk CC1		9.3%	1.5%	3.6%	3.8%	4.6%	7.5%
Redhawk CC2		22.7%	20.0%	12.0%	2.6%	14.3%	7.5%
Steam Plants	8.8%	8.4%	16.6%	24.5%	11.4%	13.9%	7.8%
Gas Turbines	8.9%	25.7%	54.2%	26.9%	33.3%	29.8%	11.1%
Saguaro CT3		12.8%	4.0%	1.8%	1.5%	5.0%	6.0%

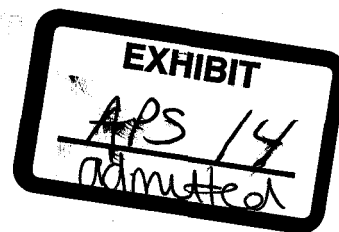
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**REBUTTAL TESTIMONY OF PETER M. EWEN**

**On Behalf of Arizona Public Service Company**

**Docket No. E-01345A-06-0009**

**March 13, 2006**



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**REBUTTAL TESTIMONY OF PETER M. EWEN  
ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY  
(Docket No. E-01345A-06-0009)**

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Peter M. Ewen. My business address is 400 N. 5<sup>th</sup> Street, Phoenix, Arizona, 85004.

Q. DID YOU PREVIOUSLY SUBMIT DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND SET FORTH IN THAT DIRECT TESTIMONY?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I discuss the impact of the change in market prices for gas and power on fuel expenses<sup>1</sup> since Arizona Public Service Company ("APS" or "Company") filed its emergency application using forward prices from November 30, 2005. I also discuss the impact on the Company's uncollected fuel balance of the power supply adjustment ("PSA") surcharge proposal offered by Utilities Division Staff ("Staff") and of the proposal by Arizonans for Electric Choice and Competition ("AECC"), and the impacts from the Company's suggested

---

<sup>1</sup> "Fuel expenses" is used in this testimony to mean fuel and purchased power expenses.

1 modifications to those proposals. Other APS witnesses discuss other aspects of  
2 these proposals.

3 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

4 **A.** Market prices for gas and purchased power have declined, at least temporarily,  
5 since the Company filed its emergency application with estimates of its 2006  
6 fuel expenses using November 30, 2005 forward prices. Indeed, those prices had  
7 declined by almost one-third through February 28, 2006 for the coming 12  
8 months. The net reduction in APS retail projected fuel costs from these price  
9 changes amounts to \$39 million because only the unhedged portion of the  
10 Company's fuel costs is affected by such price movements. Moreover, even with  
11 such dramatic price declines, the Company's gas and power hedges for the next  
12 12 months still are about \$10 million below market prices. Using the normalized  
13 and adjusted test year levels, the Company's fuel-related expense in our general  
14 rate case would decline by \$67 million assuming the February 28, 2006 prices  
15 hold.

16  
17 The Staff and AECC witnesses have proposed implementing alternative  
18 surcharge adjustments to help address APS's under-collection of fuel expenses.  
19 With the modifications proposed by the Company and discussed by APS witness  
20 Steve Wheeler, the Staff proposal does provide additional fuel expense recovery  
21 in 2006 but falls far short of the Company's interim rates request and will still  
22 leave a significant uncollected balance estimated to be approximately \$241  
23 million by year-end 2006.

24 **II. GAS PRICE DECLINES REDUCE FUEL COSTS**

25 **Q. HAS THE COMPANY RECALCULATED ITS FUEL EXPENSES BASED**  
26 **ON MORE CURRENT FUEL AND PURCHASED POWER PRICES?**

1 A. Yes. The Company re-estimated its fuel expenses using February 28, 2006  
2 forward prices for March 2006 through February 2007. Forward prices for  
3 natural gas and on-peak power for those months were approximately 33% lower  
4 on February 28, 2006 than they were on November 30, 2005. At \$60/MWh for  
5 on-peak power at Palo Verde and \$7.13/mmbtu for natural gas delivered at the  
6 Company's in-valley gas plants, these prices are now close to the level they were  
7 in March 2005. As Staff witness William Gehlen noted in his testimony, the  
8 Company is 85% hedged on its gas and power requirements in this time frame.  
9 The Company expects to procure about 8,500 GWh of energy to serve our native  
10 load customers over the next 12 months through our own gas generation or from  
11 wholesale market purchases, and the price for over 7,000 GWh of this energy is  
12 already locked in. Thus, the impact on the Company's fuel expense is primarily  
13 due to the lower fuel prices on the unhedged 15%. In addition, the lower fuel  
14 and purchased power prices means that the Company's off-system sales decline  
15 by about \$5 million. These two factors result in a net reduction to the  
16 Company's retail fuel expenses over the next 12 months of about \$39 million.

17 **Q. ARE YOU CONFIDENT THAT THESE FUEL EXPENSE REDUCTIONS**  
18 **WILL BE PERMANENT?**

19 A. No, not at all. The amounts I have described are merely a snapshot of expected  
20 costs at a point in time. While I do not expect prices to move dramatically one  
21 way or another, I cannot predict what they will do. In fact, prices already have  
22 moved higher since I prepared these estimates. Furthermore, forward prices for  
23 2007 are higher than those for 2006.

24 **Q. WHAT IS THE IMPACT FROM THESE PRICE CHANGES ON THE**  
25 **COMPANY'S REQUEST?**  
26

1 A. The change to the Company's request is \$67 million. The standard pro forma  
2 adjustment that is made to fuel expenses includes several normalizing  
3 adjustments, including those for planned maintenance at the Company's power  
4 plants, year-end customer and corresponding sales annualizations, and known  
5 and measurable changes in supply contracts. Although the Company is hedged  
6 at 85% for its anticipated gas and power needs in 2006, the hedged quantities are  
7 a lower share of the total in the standard pro forma adjustment. Therefore, the  
8 price declines have had a more material impact on the overall request than the  
9 Company will see in actual costs.

10 **Q. YOU MENTION THE COMPANY'S CURRENT HEDGE POSITION.  
11 HOW DO THOSE HEDGE POSITIONS COMPARE TO CURRENT  
12 MARKET PRICES?**

13 A. Even with the lower market prices, the Company's hedges are at prices lower  
14 than market by about \$10 million. Thus, the reduction in market prices does not  
15 have any impact on about 85% of the Company's fuel expense because the  
16 Company locked in lower prices over the last two years.

17 **Q. IS THE COMPANY'S PROJECTED FUEL EXPENSE IMPACTED BY  
18 THE UNPLANNED OUTAGES AT THE PALO VERDE NUCLEAR  
19 GENERATING STATION?**

20 A. No. Instead, the amounts I discuss above assume normal operations for the Palo  
21 Verde Nuclear Generating Station ("Palo Verde") and the Company's other  
22 baseload plants for both the next 12 months' fuel expense projections and the  
23 standard pro forma expense calculation.

24 **III. STAFF AND INTERVENOR PROPOSALS LEAVE LARGE FUEL  
25 EXPENSE UNDER-COLLECTED BALANCES IN 2006**  
26



1 Q. HAVE YOU CALCULATED THE IMPACT ON THE COMPANY FROM  
2 THE VARIOUS PROPOSALS BY STAFF AND ARIZONANS FOR  
3 ELECTRIC CHOICE AND COMPETITION?

4 A. Yes. The following table summarizes the impact each of the proposals would  
5 have on the Company's under-collected fuel expense balance at the end of 2006  
6 and the amount of recovery that occurs in 2006:

Proposal	2006 Year-End	2006 Additional
	Balance (\$ millions)	Revenue (\$ millions)
ACC Staff	\$ 255	\$ 57
AECC	\$ 174	\$ 137
Staff Modified by APS	\$ 241	\$ 71
AECC and Staff Modified	\$ 167	\$ 144
APS Emergency Request	\$ 113	\$ 211

11 In order to provide an estimate of the impact of the Staff's proposal, I assumed  
12 that Staff provided a positive recommendation to the Commission within 30  
13 days of the Company's quarterly filing and that such recommendation was  
14 implemented within the following 30 days. If those assumptions are correct, the  
15 Company would experience an increase in cash flow in 2006 of \$57 million. The  
16 modifications to Staff's proposal described in Mr. Wheeler's testimony would  
17 provide an additional \$14 million of fuel expense recovery relative to the Staff  
18 proposal. The AECC proposal described by Mr. Higgins provides \$137 million  
19 of fuel expense recovery in 2006 and includes the first step of the Company's  
20 February 3, 2006 surcharge request plus \$126 million. Combining AECC's  
21 proposal with the Company's proposed modifications of Staff's proposal as  
22 described in Mr. Wheeler's testimony provides an additional \$7 million of fuel  
23 expense recovery relative to the AECC proposal. The Company's emergency  
24 request provides the greatest recovery of fuel expenses. In both the revenue  
25 recovery I describe here and the uncollected fuel expense balance I describe  
26

1 below, I have assumed for all of the proposals that the Commission approves  
2 both steps of the Company's February 3, 2006 surcharge application, although  
3 the second step does not yield any additional revenue in the AECC proposal.

4 **Q. DOES THE COMPANY STILL HAVE A LARGE UNDER-COLLECTED**  
5 **FUEL EXPENSE BALANCE AT THE END OF 2006 UNDER ANY OF**  
6 **THESE PROPOSALS?**

7 **A.** Yes. Setting aside the unrecovered balance in the 2006 Annual Adjustor Account  
8 (which will be approximately \$12 million at 2006 year-end), the Company's  
9 emergency request manages to reduce the undercollection of fuel expenses to  
10 \$113 million at the end of 2006. The balances in each of the other proposals are  
11 significantly larger, ranging from \$167 million under the combination of the  
12 AECC proposal and the Company's modified Staff proposal to \$255 million  
13 under the Staff proposal. These uncollected balances include the amounts  
14 remaining in the Surcharge Accounts at the end of 2006. That is, in both the  
15 Staff proposal and the APS modification to the Staff proposal, significant  
16 amounts of unrecovered fuel expenses will have been moved to the Surcharge  
17 Account and a relatively small balance will remain unaddressed in the Annual  
18 Tracking Account. The important point, though, is that the recovery under these  
19 two proposals begins very late in the year and provides much less help with the  
20 Company's 2006 financial condition. APS witnesses Steve Wheeler and Don  
21 Brandt discuss the impact of these recovery impacts on the Company's  
22 financials.

23 **Q. DOES THIS CONCLUDE YOUR PREFILED REBUTTAL TESTIMONY**  
24 **IN THIS PROCEEDING?**

25 **A.** Yes.  
26

# ARIZONA PUBLIC SERVICE COMPANY

## Schedule 1

### 2006 Annual Tracking Account

#### Emergency Rates plus Surcharge Step 1 effective May, Step 2 effective July - Projected at the 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Purchased Power Costs	(e) Off-System Sales Revenue	(f) Net Native Load Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Interest (l * rate/12)	(l) Cumulative Amount (j + k + l)
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 69,507	\$ (721)	\$ (649)	\$ 108	\$ 29,181
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 80,372	\$ 17,979	\$ 16,181	\$ 107	\$ 45,468
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 93,716	\$ 36,943	\$ 33,249	\$ 166	\$ 78,883
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 92,479	\$ 36,352	\$ 32,717	\$ 288	\$ 111,888
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 76,602	\$ 12,508	\$ 11,257	\$ 408	\$ 123,553
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 62,620	\$ (5,125)	\$ (4,613)	\$ 451	\$ 119,391
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 55,764	\$ (18,976)	\$ (17,078)	\$ 436	\$ 102,749
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 63,896	\$ (18,383)	\$ (16,545)	\$ 375	\$ 86,579
12.5												\$ 316	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 748,946	\$ 93,502	\$ 84,151	\$ 2,744	\$ 86,895
14	Interest Rate <sup>7</sup>												

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36 (\$299,036), ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

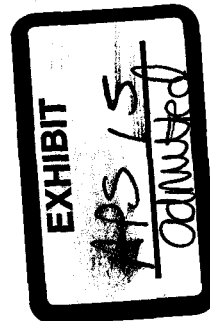
<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

<sup>5</sup> Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>6</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>7</sup> Base Rate Power Supply Cost is \$0.020743/kWh from January through April, \$0.029419 from May through December.

<sup>8</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 3

2006 Annual Adjustor Account

Emergency Rates plus Surcharge Step 1 effective May, Step 2 effective July - Projected at the 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>	1,936,737	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
4 Revenue True-up from January Estimate <sup>2</sup>												
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
6 Monthly Interest ((Line 1 + Line 2) * (4.38% / 12)) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Ending Balance (Ln. 3 + Ln. 4 + Ln. 5 - Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

Emergency Rates plus Surcharge Step 1 effective May, Step 2 effective July - Projected at the 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,219	\$ 1,224	\$ 1,228	\$ 1,233	\$ 1,237
2 Amounts Removed due to Authorized Surcharge					\$ 15,292		\$ 44,562					
3 Monthly Interest (Line 1 * [4.38% / 12]) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,219	\$ 1,224	\$ 1,228	\$ 1,233	\$ 1,237	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

Emergency Rates plus Surcharge Step 1 effective May, Step 2 effective July - Projected at the 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Surcharge Rate (\$/kWh)					0.000554	0.000554	0.002165	0.002165	0.002165	0.002165	0.002165	0.002165
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>	-	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3 Beginning Balance	\$ -				\$ 15,292	\$ 14,248	\$ 57,483	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4 Less: Revenue from Surcharge Rate (Line 1 * Line 2)	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5 Monthly Interest (Line 3 * [4.38% / 12]) <sup>2</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6 Ending Balance with Interest (Line 3 - Line 4 + Line 5)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,921	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations

Emergency Rates plus Surcharge Step 1 effective May, Step 2 effective July - Projected at the 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 29,180	\$ 45,468	\$ 78,883	\$ 111,888	\$ 123,553	\$ 119,391	\$ 102,749
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ 107	\$ 166	\$ 288	\$ 408	\$ 451	\$ 436	\$ 375
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ (649)	\$ 16,181	\$ 33,249	\$ 32,717	\$ 11,257	\$ (4,613)	\$ (17,078)	\$ (16,545)
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 29,180	\$ 45,468	\$ 78,883	\$ 111,888	\$ 123,553	\$ 119,391	\$ 102,749	\$ 86,579
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,861	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,219	\$ 1,224	\$ 1,228	\$ 1,233	\$ 1,237
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,219	\$ 1,224	\$ 1,228	\$ 1,233	\$ 1,237	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,483	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 12 + Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,921	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
<b>18 Combined Balance (Ln. 4 + Ln. 8 + Ln. 12 + Ln. 17)</b>	<b>\$ 172,898</b>	<b>\$ 169,664</b>	<b>\$ 171,451</b>	<b>\$ 179,463</b>	<b>\$ 170,427</b>	<b>\$ 175,890</b>	<b>\$ 191,320</b>	<b>\$ 206,220</b>	<b>\$ 200,366</b>	<b>\$ 181,941</b>	<b>\$ 153,407</b>	<b>\$ 124,983</b>
<b>19 Combined Monthly Interest (Ln. 2 + Ln. 6 + Ln. 10 + Ln. 14)</b>	<b>\$ 619</b>	<b>\$ 631</b>	<b>\$ 619</b>	<b>\$ 626</b>	<b>\$ 655</b>	<b>\$ 623</b>	<b>\$ 642</b>	<b>\$ 698</b>	<b>\$ 752</b>	<b>\$ 731</b>	<b>\$ 684</b>	<b>\$ 560</b>

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

Emergency Rates plus Surcharge Step 1 & 2 effective May - Projected at the 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and Purchased Power Costs	(e) Off-System Sales Revenue	(f) Native Load Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing Collection	(j) Post 90/10 Sharing Collection	(k) Interest (i * rate/12)	(l) Cumulative Amount (j + k + l)
				(a + b)			(d - e)	(a/c * f)	(a * 0.020743)	(g - h)	(i * 0.9)		
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 69,507	\$ (721)	\$ (649)	\$ 108	\$ 29,181
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 80,372	\$ 17,979	\$ 16,181	\$ 107	\$ 45,468
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 93,716	\$ 36,943	\$ 33,249	\$ 166	\$ 78,883
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 92,479	\$ 36,352	\$ 32,717	\$ 288	\$ 111,888
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 76,602	\$ 12,508	\$ 11,257	\$ 408	\$ 123,553
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 62,620	\$ (5,125)	\$ (4,613)	\$ 451	\$ 119,391
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 55,764	\$ (18,976)	\$ (17,078)	\$ 436	\$ 102,749
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 63,896	\$ (18,383)	\$ (16,545)	\$ 375	\$ 86,579
12.5												\$ 316	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 748,946	\$ 93,502	\$ 84,151	\$ 2,744	\$ 86,895
14	Interest Rate <sup>7</sup>												

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

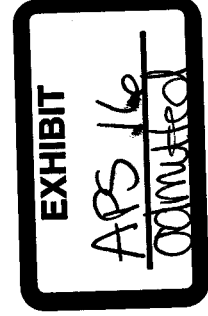
<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>5</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>6</sup> Base Rate Power Supply Cost is \$.020743/kWh from January through April, \$.029419 from May through December.

<sup>7</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.





ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

Emergency Rates plus Surcharge Step 1 & 2 effective May - Projected at the 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 979	\$ 983	\$ 986	\$ 990	\$ 994	\$ 997	\$ 1,001
2				\$ 59,761								
3	\$ 218	\$ 219	\$ 220	\$ 221	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4
4	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 979	\$ 983	\$ 986	\$ 990	\$ 994	\$ 997	\$ 1,001	\$ 1,005

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

**ARIZONA PUBLIC SERVICE COMPANY**  
**Schedule 6**

**Summary of 2006 Monthly Calculations**  
**Emergency Rates plus Surcharge Step 1 & 2 effective May - Projected at the 2/28/06 Market**  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 29,180	\$ 45,468	\$ 78,883	\$ 111,888	\$ 123,553	\$ 119,391	\$ 102,749
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ 107	\$ 166	\$ 288	\$ 408	\$ 451	\$ 436	\$ 375
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ (649)	\$ 16,181	\$ 33,249	\$ 32,717	\$ 11,257	\$ (4,613)	\$ (17,078)	\$ (16,545)
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 29,180	\$ 45,468	\$ 78,883	\$ 111,888	\$ 123,553	\$ 119,391	\$ 102,749	\$ 86,579
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 979	\$ 983	\$ 986	\$ 990	\$ 994	\$ 997	\$ 1,001
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 221	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4	\$ 4
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (59,761)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 979	\$ 983	\$ 986	\$ 990	\$ 994	\$ 997	\$ 1,001	\$ 1,005
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 59,761	\$ 55,681	\$ 50,493	\$ 44,194	\$ 37,853	\$ 31,718	\$ 26,727	\$ 22,568
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 218	\$ 203	\$ 184	\$ 161	\$ 138	\$ 116	\$ 98	\$ 82
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 4,299	\$ 5,391	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 12 + Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 55,681	\$ 50,493	\$ 44,194	\$ 37,853	\$ 31,718	\$ 26,727	\$ 22,568	\$ 18,282
<b>18 Combined Balance (Ln. 4 + Ln. 8 + Ln. 12 + Ln. 17)</b>	<b>\$ 172,898</b>	<b>\$ 169,864</b>	<b>\$ 171,451</b>	<b>\$ 179,463</b>	<b>\$ 167,228</b>	<b>\$ 168,668</b>	<b>\$ 184,072</b>	<b>\$ 198,945</b>	<b>\$ 193,065</b>	<b>\$ 174,613</b>	<b>\$ 146,052</b>	<b>\$ 117,602</b>
<b>19 Combined Monthly Interest (Ln. 2 + Ln. 6 + Ln. 10 + Ln. 14)</b>	<b>\$ 619</b>	<b>\$ 631</b>	<b>\$ 619</b>	<b>\$ 626</b>	<b>\$ 655</b>	<b>\$ 611</b>	<b>\$ 616</b>	<b>\$ 672</b>	<b>\$ 726</b>	<b>\$ 705</b>	<b>\$ 638</b>	<b>\$ 533</b>

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

EXHIBIT

APS-17

admitted

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**REBUTTAL TESTIMONY OF ELLIOTT D. POLLACK**

**On Behalf of Arizona Public Service Company**

**Docket No. E-01345A-06-0009**

March 13, 2006

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1                                   **REBUTTAL TESTIMONY OF ELLIOTT D. POLLACK**  
2                                   **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**  
3                                   **(Docket No. E-01345A-06-0009)**

4    I.    INTRODUCTION

5    Q.    **PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

6    A.    My name is Elliott D. Pollack. My business address is 7505 E. Sixth Avenue,  
7           Scottsdale, Arizona 85251.

8    Q.    **BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?**

9    A.    I am the President of Elliott D. Pollack and Company, an economic and real  
10           estate consulting firm.

11  
12   Q.    **WOULD YOU DISCUSS YOUR EDUCATIONAL BACKGROUND AND**  
13           **BUSINESS EXPERIENCE?**

14   A.    I earned a Bachelor of Science in Accounting from Boston University in 1967  
15           and a Masters in Business Administration from the University of Southern  
16           California in 1968. I am a Chartered Financial Analyst, a licensed real estate  
17           broker, a licensed mortgage broker and a consulting economist to the Arizona  
18           State University Economic Outlook Center. I am also a member of several  
19           business and civic organizations such as the Institute for Investment  
20           Management, American Society of Real Estate Counselors, Arizona Economic  
21           Round Table, and the Joint Legislative Budget Advisory Committee, to name a  
22           few. I have also been a member of the State Treasurer's Advisory Committee,  
23           and am the editor of the *Arizona and Greater Phoenix Blue Chip Economic*  
24           *Forecast*. As President of Elliott D. Pollack and Company, I provide consultation  
25           on all aspects of the Arizona economy with specialization in the real estate  
26

1 market. My background and experience are set forth in detail in Attachment  
2 EDP-1, Appendix A.

3 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

4 A. Arizona Public Service Company ("APS" or "Company") has requested, in light  
5 of the recommendations of Staff and other parties in this proceeding, that I  
6 examine how the downgrading of APS' bond rating to non-investment "junk"  
7 status might impact economic development in Arizona generally. The  
8 Company's primary concern is that a junk bond rating will send a negative  
9 message to the business community that the utility will have difficulty in  
10 securing future financing for capital improvements that are necessary to keep up  
11 with the energy needs of our rapidly growing state and the Company's rapidly  
12 growing customer base. To that end, I have prepared a report, "Review of Utility  
13 Reliability and Economic Development" ("Pollack Report"), which is attached  
14 as Attachment EDP-1.

15  
16 **II. SUMMARY**

17 **Q. PLEASE SUMMARIZE THE POLLACK REPORT.**

18 A. Economic development experts consider energy dependability to be a vital  
19 factor for many export-based businesses making relocation or expansion  
20 decisions. It is clear that a non-investment junk credit rating of the local electric  
21 utility will negatively impact businesses' perceptions about Arizona. The mere  
22 perception that a utility may become unreliable, whether factually correct or not,  
23 will be enough to negatively impact economic growth in Arizona.

24 While it may be difficult to provide specific estimates for economic losses as a  
25 result of a junk credit rating, it is possible to provide a general perspective into  
26 the potential economic losses through the use of economic modeling. Based on

1 my calculations, even if annual employment growth declined by less than 1%  
2 because certain businesses decided not to locate or expand their business in  
3 Arizona, it could have a notable effect on the state.

4 **Q. WHAT RESEARCH DID YOU DO TO REACH THESE CONCLUSIONS?**

5 A. First, I reviewed economic development documents to determine what site  
6 location factors are key for making business expansion decisions. Second, I  
7 quantified the potential economic losses to the State of Arizona that could result  
8 if there were a decline in employment growth because businesses no longer view  
9 Arizona as having reliable energy. The results of this research are set forth in  
10 detail in the Pollack Report.

11 **Q. WHAT WOULD THE EFFECT BE ON THE STATE IF ANNUAL**  
12 **EMPLOYMENT GROWTH DECLINED LESS THAN 1%?**

13 A. If annual employment growth in Arizona were to decline by just one-tenth of 1%  
14 during the next five years, the state would lose approximately \$2.6 billion in  
15 economic activity. If the annual employment growth were to decline by one-half  
16 of 1%, the cumulative five-year economic loss would be approximately \$13  
17 billion. Even small losses in employment translate into large economic and  
18 fiscal losses. Details regarding my analysis are set forth in detail in the Pollack  
19 Report.

20 **III. CONCLUSION**

21  
22 **Q. IS IT YOUR OPINION THAT IF APS' BOND RATING WAS**  
23 **DOWNGRADED TO JUNK STATUS THAT ECONOMIC**  
24 **DEVELOPMENT IN ARIZONA WOULD BE NEGATIVELY**  
25 **IMPACTED?**

26 A. Yes. Economic development experts consider energy dependability to be an  
important site location factor. Anything done to compromise Arizona's position

1 relative to this factor will dampen future economic development. If the state's  
2 largest electric utility is downgraded to non-investment junk status, it will  
3 negatively effect businesses' perception of the reliability of Arizona's energy  
4 infrastructure. When energy-intensive export-based businesses perceive  
5 Arizona as a risky expansion location because of a potential lack of energy  
6 reliability, we will see lower investment and fewer jobs in those industries.  
7 Small job losses in these industries will have a negative impact on the State's  
8 domestic industries. While it is difficult to determine with specificity the extent  
9 these negative perceptions might slow employment growth or inhibit business  
10 growth, small losses in employment or business growth amount to large  
11 economic and fiscal losses for the state.  
12  
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15 **Q. DOES THIS CONCLUDE YOUR PREFILED REBUTTAL TESTIMONY**  
16 **IN THIS PROCEEDING?**

17 **A. Yes.**  
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## **Review of Utility Reliability and Economic Development**

**Prepared For:**  
Arizona Public Service

**Prepared By:**



Elliott D. Pollack & Company  
7505 East Sixth Avenue, Suite 100  
Scottsdale, Arizona 85251

March 2006

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As requested, my firm examined the issue of how the downgrading of APS's bond rating to junk status may impact economic development in Arizona. The primary concern is that a junk bond rating at APS may send a negative message to the business community. The message is that the utility will have difficulty in securing future financing for capital improvements that are necessary to keep up with the power needs of our rapidly growing state.

Our research on this matter can be separated into two distinct parts:

- First, we reviewed economic development documents that list important site location factors related to business expansion decisions. A site location factor may come in the form of something intangible such as a local government being friendly towards business operations, or something tangible such as the provision of a quality transportation infrastructure. The goal of this portion of the review was to identify the importance of energy reliability in business site selection decisions.
- Second, we quantified potential economic losses to the state in terms of dampened employment growth that could result if businesses no longer view Arizona as having reliable energy. The goal here was to provide perspective into how future employment losses will translate into economic and fiscal losses.

#### Economic Fundamentals

It is clear that a junk credit rating of the local electric utility will negatively impact businesses' perceptions about Arizona. It will raise questions about the utility's ability to finance growth and further questions about the future reliability of the electric system. Although I am not able to give a point estimate economic impact, a reasonable range of effects can be estimated through use of economic modeling techniques that quantify the economic and fiscal impacts associated with job gains or losses.

If businesses begin to perceive Arizona as a risky expansion location because of a lack of energy reliability, it is likely that job losses would occur within the state's base, or export industries. These are industries whose demand for goods and services comes primarily from out of state. These are also the industries that can locate elsewhere because of energy reliability factors. Examples of base industries include most manufacturing, some advanced professional business services, some transportation services, tourism, and federal government. In other words, these are the industries that induce dollars to flow into Arizona and that keep the local economy functioning.

Base industries are also important because they induce the development of local market business operations. Local market businesses support the base industry companies and their employees. For example, the existence of a company such as Intel results in the development of businesses that support Intel operations. These supporting operations

include suppliers of materials, local accounting services, janitorial services, etc. Furthermore, the employees of Intel and its suppliers spend money in the local economy and create demand for additional local market business operations such as restaurants, retail establishments, dry cleaners, etc. This is what is known as the multiplier effect. The multiplier effect of many of the state's base industries tends to be quite large because wages at these firms tend to be above average.

This implies that if a poor bond rating at a local electric utility impacts a business location decision, the impact on the State of Arizona is greater than just the employment at the disenfranchised business. In fact, for some industries, the loss of each 100 base industry employees translates into the loss of another 150 or so supporting employees. The calculations provided in this memo provide some perspective into these potential losses.

#### Site Location Factors

During my many decades of working as an economist in Arizona, I have examined, on many occasions, the issue of what drives our economy. My resume is included as Appendix A. In my professional opinion, our economy grows because of issues related to "people", "government", and "resources."

*People* issues relate to items such as lifestyle, climate, cost of living, cost of housing, air quality, social infrastructure, etc. *Government* issues relate to items such as a pro growth attitude, attractive tax rates and policies, reasonable regulation policies, etc. *Resources* relates to items such as energy cost and availability, water cost and availability, land cost and availability, etc. Different parts of the state perform differently in relation to these individual items. However, as a whole, Arizona ranks high in these factors and the result has been dramatic economic growth during the past several decades. In my opinion, the provision of a reliable source of energy is one of the most important factors within the "resources" category.

In order to supplement my professional opinion, my staff conducted further research into business location factors. Much has been written on the topic in recent years as economic development groups have become savvy in their efforts. The research consistently identified that when making a relocation or expansion decision, businesses review items such as the reliability and affordability of the local workforce, transportation infrastructure, tax rates and policy, access to major markets, and energy reliability and cost, among others. Energy reliability consistently appeared in the lists of site location factors for certain important industries.

The research also identified that businesses that use large quantities of power in their operations (i.e. high tech manufacturing), or who work with sensitive products (i.e. biotech research) rank energy dependability very high on their lists. Additionally, it appears that energy reliability is an important resource need of expanding telecommunications companies and transportation service companies. A sample list of public documents that reference energy dependability as an important site location factor is included as Appendix B. As noted, a portion of my opinion is based on my many years

of experience as a practicing economist, or is based on work my firm completed on the topic.

As a specific example, work conducted by our own Greater Phoenix Economic Council (GPEC) identified that energy dependability ranked fourth on the list of site location factors for the bio-industry cluster. GPEC also ranked energy dependability in the top ten for the business services cluster. In additional documents, GPEC identified reliable power as one of the top three infrastructure requirements of the aerospace industry.

These are actually very important points. Many of the state's base industries, or the industries that import dollars into the local economy and result in economic growth, are dependent on the reliability of the local electric utility. The mere perception that a utility may be unreliable, regardless of if the perception is based on factual evidence, will be enough to negatively impact economic growth in Arizona. As we all know, perceptions are hard to change once formed. This is a risky path to take.

#### Impacts from Suppressed Growth

There appears to be ample evidence that energy reliability is an important factor to consider when relocating or expanding a business. However, there is no way of knowing with complete certainty the full extent to which a junk credit rating for APS will result in fewer businesses locating in Arizona over the long run. Therefore, it is difficult to provide specific estimates for economic losses as a result of this credit designation. On the other hand, it is possible to provide some general perspective into the possible economic losses through use of economic modeling.

The primary losses would be to employment. In order to provide some insight into how dampened employment growth translates into dampened overall economic growth, multiple employment growth scenarios were run through my firm's economic and fiscal impact model. This model is being used by a number of private and public entities and is considered a credible calculator of direct and indirect economic impacts. A description of the model and the data sources used in calculating the economic and fiscal impacts is available on the FAQ page of the following website: [www.retentionand relocation.com](http://www.retentionand relocation.com).

For some brief background on economic modeling, the different types of economic impacts are known as direct, indirect, and induced, according to the manner in which the impacts are generated. For instance, direct employment consists of permanent jobs held by the company or industry being analyzed. Indirect employment is those jobs created by businesses that provide goods and services essential to the operation of the subject company or industry. Finally, the spending of the wages and salaries of the direct and indirect employees on items such as food, housing, transportation and medical services creates induced employment in all sectors of the economy throughout the metropolitan area.

As a first approach, we calculated that during the last ten years (1996 through 2005), overall employment growth in the State of Arizona averaged 3.4% on an annual basis. For sake of argument, let's assume that a junk credit rating for Arizona's largest utility

sends the message to some that Arizona is not as desirable of a place to conduct business. If annual employment growth during the next five years declines just one-tenth of 1%, from 3.4% to 3.3%, during the next five years alone the State of Arizona would lose approximately \$2.6 billion in economic activity. By the end of the fifth year, 14,000 fewer jobs would exist in the state.

Again, this is just over five years. The state would also lose over \$60 million in tax revenue during the same timeframe. If a person believes that employment growth could slow by one-half of 1% as a result of a junk credit rating, one may multiply the economic impact figures by five, for a cumulative five year economic loss of \$13 billion. In this case, the state would lose \$300 million in tax revenue during the five year period. It does not take much in terms of suppressed employment growth to amount to massive economic and fiscal losses.

As a second approach, we calculated how suppressed economic growth would translate into economic and fiscal impacts by using the realized employment statistics of 2005 for select industries. These one-year impacts provide perspective into the current importance of these industries in the state's workforce. Consider the following points:

- 1% of the state's manufacturing employment in 2005, or about 1,800 workers, resulted in the creation of approximately 750 jobs at businesses that supply goods and services to the manufacturers, and over 1,900 jobs at businesses that are supported by employee spending such as restaurants, dry cleaners, etc. This cumulative employment of about 4,500 persons was responsible for contributing over \$700 million in economic output to the state in 2005. This activity also contributed over \$25 million to the state's tax collection total in 2005. Five percent of the state's manufacturing workforce contributed five times these amounts; ten percent contributed ten times these amounts, etc.
- 1% of the state's transportation and warehousing employment in 2005 contributed about \$200 million in economic output after all multiplier effects are counted, with \$3.3 million in resulting deposits into the state's coffers.
- 1% of the state's professional and business services employment in 2005 contributed approximately \$550 million in economic output, and contributed over \$10.8 million to the state's tax collection totals.

We could give other examples as well. Consider that these values are just the economic impacts associated with 1% changes in employment in 2005. If employment losses are realized over multiple years, significant economic and fiscal losses would also occur over multiple years. Indeed, the cumulative impact can grow large. As noted above, if the state's manufacturing employment is reduced by 1,800 workers over a ten year period, cumulative economic losses would total about \$7 billion.

The point here, again, is that small losses in employment translate into large economic and fiscal losses. Remember, the site selection research indicated that high tech firms,

including manufacturers, require a reliable energy source in making expansion or relocation decisions. The same is true of professional business services and transportation activities, among others.

#### For Further Consideration

Bio-industry (a.k.a. biotech) is mentioned prominently by GPEC as an industry that the state wants to attract. The State of Arizona, and the Metro Phoenix area, have already spent large amounts of tax dollars to attract TGen and other biotech companies, and more spending is being considered. The biotech industry lists dependable energy as an important site location factor. Anything that would affect energy dependability would dampen the prospects of developing this industry, an industry that the state so badly wants to have as part of its economic future.

Employment within this local industry is still fairly small in number. According to a document produced for the 2005 Arizona Town Hall, 5,300 persons were employed in the bio-industry cluster in 2003. We could not find a number for 2005 but it is assumed to be relatively small. This means that small changes in biotech employment will not translate into significant economic and fiscal impacts in the short run.

However, long run impacts could be more significant. This industry is still in its infancy. Proponents of bioscience development have indicated that this is a critical time for Arizona to be supportive of this cluster. It is not clear how adversely a junk credit rating at APS may impact the development of this industry. But, if the economic development experts are correct that the industry pays attention to such things, some negative impact will be realized.

#### Conclusion

Economic development practitioners consider energy dependability to be an important site location factor. Anything done to compromise Arizona's position relative to this factor will dampen future economic development.

One such detrimental action is allowing APS's credit rating to be reduced to junk status. The result could be a shift in business perceptions about Arizona from very favorable to not so favorable. The extent these negative perceptions would slow employment growth is uncertain. However, it does not take much in terms of employment losses to amount to very large economic and fiscal losses for the state.

## **Appendix A – Biography of Elliott D. Pollack**

Elliott D. Pollack is President of Elliott D. Pollack and Company, an economic and real estate consulting firm. Elliott D. Pollack and Company provides consultation on all aspects of the Arizona economy with specialization in the real estate market. Through affiliated companies, Mr. Pollack has syndicated and master planned numerous properties. He has also renegotiated notes and restructured many partnerships. Because of his strong economic background, he is highly knowledgeable about trends in real estate and how these relate to land value, usage and timing for improvements and development.

For fourteen years, Mr. Pollack served as Chief Economist of Valley National Bank of Arizona. He was responsible for Valley National Bank's asset/liability model and for the state and national econometric model which he built and implemented. He was responsible for local, state and national economic forecasting to the Board of Directors, customers, business, industry and analysts. Mr. Pollack was editor of Valley National Bank's monthly economic publication "Arizona Progress" and the annual "Arizona Statistical Review".

Widely quoted by local, state, regional and national media, Mr. Pollack's credentials are extensive. He is a Chartered Financial Analyst, a member of the Institute for Investment Management, Arizona Economic Round Table, National Association of Business Economists, Economic Estimates Commission, Joint Legislative Budget Advisory Committee, State Treasurer's Advisory Committee, the Phoenix Commission on the Economy, and CityShape 2020 (the advisory team for the City of Scottsdale). He is a consulting economist at Arizona State University, an editor of "Arizona Blue Chip Economic Forecast" and "Greater Phoenix Blue Chip Economic Forecast." Mr. Pollack is also a member of the American Society of Real Estate Counselors, a licensed real estate broker, a licensed mortgage broker, and a Certified General Appraiser in the State of Arizona.

He has been a keynote speaker for numerous national conventions and university luncheons. Mr. Pollack has also served on the Board of Directors and the Advisory Board of Sun State Savings and Loan. He has served on a local Advisory Board to the Resolution Trust Corporation. He was also Chair to the City of Phoenix Ad Hoc Committee on Resolution Trust Corporation Affairs. He is currently on the Board of Directors for the Phoenix Chamber of Commerce.

Mr. Pollack has undertaken economic studies which examine real estate projects from a variety of perspectives. Mr. Pollack was under contract to the Arizona State Land Department as a Land Disposition Consultant providing services in the areas of land valuation, marketability studies, feasibility analysis, infrastructure cost analysis, and commercial lease analysis. He has developed sophisticated models of real estate value appreciation for the Phoenix area which are devoted to analyzing alternative land use strategies for property and economic feasibility. As one of Arizona's leading economists,

Mr. Pollack is constantly monitoring construction, sales, and leasing activity to determine absorption rates and anticipated time frames for market recovery. Mr. Pollack has also conducted marketability and supply and demand studies on retail, industrial, and residential properties for a number of private clients. He is also an expert in the valuation of fractionalized interests in limited partnerships.

Mr. Pollack has been an expert witness in litigation where detailed information is needed on the Arizona economy, its real estate markets, and feasibility of plans. Mr. Pollack has testified extensively regarding interest rates.

Elliott D. Pollack and Company produces the Greater Phoenix by the Numbers data book.

Mr. Pollack earned a Bachelor of Science in Accounting from Boston University in 1967 and a Masters in Business Administration from University of Southern California in 1968. He has served on the Board of Directors of numerous civic, community and cultural organizations.



## Appendix B – Select References

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ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

Staff Proposal with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and System Book <sup>4</sup> Purchased Power Costs Power Costs	(e) Off-System Sales Revenue	(f) Net Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
				(a + b)			(d - e)	(a/c * f)	(a * Base Rate)	(g - h)	(i * 0.9)			
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ -	\$ 108	\$ 47,629
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ 174	\$ 85,316
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ 311	\$ 143,751
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 525	\$ 201,539
9	September	2,603,844	68,796	2,672,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ 33,324	\$ 736	\$ 200,538
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 732	\$ 213,278
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 778	\$ 211,779
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ 144,287	\$ 773	\$ 68,680
12.5													\$ 251	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 288,960	\$ 242,064	\$ 177,611	\$ 4,477	\$ 68,930
14	Interest Rate <sup>7</sup>													

4.38%

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, (SFS) and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

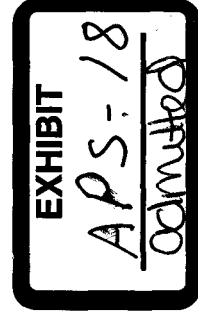
<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>5</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>6</sup> Base Rate Power Supply Cost is \$.020743/kWh from January through December.

<sup>7</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 3**

**2006 Annual Adjustor Account**

**Staff Proposal with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market**  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhrs) <sup>1</sup>		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Line 3 + Line 4) * (4.38% / 12)) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

Staff Proposal with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge					\$ 15,292		\$ 44,562					
3 Monthly Interest (Line 1 * (4.38% / 12)) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

## (\$ in thousands)

Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations

Staff Proposal with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ -	\$ 2,697	\$ 15,126	\$ 29,721	\$ 47,628	\$ 85,316	\$ 143,750	\$ 201,538	\$ 200,538	\$ 213,278	\$ 211,778
2 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ 10	\$ 55	\$ 108	\$ 174	\$ 311	\$ 525	\$ 736	\$ 732	\$ 778	\$ 773
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (33,324)	\$ -	\$ -	\$ (144,287)
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 47,628	\$ 85,316	\$ 143,750	\$ 201,538	\$ 200,538	\$ 213,278	\$ 211,778	\$ 68,679
4.5 Tracking Account Surcharge	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,844	\$ 27,120	\$ 24,858	\$ 156,403
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,488	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,488	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
18 Combined Balance (Ln. 4, 5, 8, 12, 17)	\$ 172,888	\$ 169,664	\$ 171,451	\$ 179,463	\$ 188,875	\$ 215,738	\$ 256,187	\$ 295,870	\$ 307,195	\$ 302,948	\$ 287,294	\$ 253,487
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 690	\$ 767	\$ 935	\$ 1,080	\$ 1,121	\$ 1,105	\$ 1,049

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

Staff Proposal with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1	Tracking Account Surcharge Rate (\$/kWh)	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001201	0.001201	0.001201	0.005159
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance											0.006360
4	Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,480	\$ 2,833	\$ 2,361	\$ 12,832
5	Monthly Interest ((Ln. 3) * (4.38% / 12)) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 109	\$ 99	\$ 91
6	Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,844	\$ 27,120	\$ 24,858	\$ 156,403

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

Staff Modified by APS plus AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and System Book <sup>4</sup> Purchased Power Costs Sales Revenue	(e) Off-System Sales Revenue	(f) Net Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
				(a + b)	(d - e)	(a/c * f)	(a * Base Rate)	(g - h)	(i * 0.9)					
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ -	\$ 6,589
3	March	1,853,941	74,143	1,928,085	\$ 49,832	\$ 4,791	\$ 45,041	\$ 40,250	\$ 36,456	\$ 4,585	\$ 4,133	\$ -	\$ -	\$ 15,126
4	April	1,879,071	64,758	1,943,829	\$ 49,832	\$ 4,791	\$ 45,041	\$ 40,250	\$ 36,456	\$ 4,585	\$ 4,133	\$ -	\$ -	\$ 29,721
5	May	2,362,657	78,278	2,440,936	\$ 57,034	\$ 5,134	\$ 51,900	\$ 46,766	\$ 42,009	\$ 16,156	\$ 14,540	\$ -	\$ -	\$ (37,371)
6	June	2,731,974	81,579	2,813,553	\$ 71,065	\$ 6,878	\$ 64,187	\$ 54,309	\$ 49,009	\$ 19,777	\$ 17,799	\$ 85,000	\$ 108	\$ (136)
7	July	3,185,559	94,760	3,280,318	\$ 101,288	\$ 9,351	\$ 91,937	\$ 82,586	\$ 76,669	\$ 41,682	\$ 37,514	\$ -	\$ -	\$ 58,129
8	August	3,143,508	79,190	3,222,698	\$ 134,546	\$ 12,831	\$ 121,715	\$ 108,884	\$ 100,078	\$ 64,581	\$ 58,123	\$ -	\$ -	\$ 115,604
9	September	2,603,844	89,796	2,693,640	\$ 128,831	\$ 11,110	\$ 117,721	\$ 106,611	\$ 95,206	\$ 63,625	\$ 57,263	\$ -	\$ -	\$ 147,614
10	October	2,128,552	63,607	2,192,159	\$ 91,499	\$ 8,415	\$ 83,084	\$ 73,069	\$ 64,012	\$ 35,098	\$ 31,588	\$ -	\$ -	\$ 160,161
11	November	1,895,524	79,817	1,975,341	\$ 59,213	\$ 5,745	\$ 53,468	\$ 47,723	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ -	\$ 585
12	December	2,171,928	64,166	2,236,094	\$ 38,337	\$ 3,678	\$ 34,659	\$ 31,000	\$ 28,319	\$ (2,531)	\$ (2,278)	\$ 93,641	\$ 237	\$ 65,478
12.5					\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ -	\$ -	\$ -	\$ -
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 86,709	\$ 842,448	\$ 573,488	\$ 288,960	\$ 242,064	\$ 178,641	\$ 2,294	\$ 65,717
14	Interest Rate <sup>7</sup>													

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

<sup>4</sup> Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>5</sup> Includes off-system revenue less mark-to-market accounting adjustments.

<sup>6</sup> Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>7</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>8</sup> Base Rate Power Supply Cost is \$0.20743/kWh from January through December.

<sup>9</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

Exb. 18-B

**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 3**

**2006 Annual Adjustor Account**

**Staff Modified by APS plus AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market**

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>		1,935,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Line 3 + Line 4) * [4.38% / 12]) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

Staff Modified by APS plus AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market  
(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
1	Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 45,944	\$ 46,112	\$ 46,280	\$ 46,449	\$ 46,619
2	Amounts Removed due to Authorized Surcharge				\$	15,292							
3	Monthly Interest (Line 1 * [4.38% / 12]) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 167	\$ 168	\$ 168	\$ 169	\$ 170	\$ 170
4	Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 45,944	\$ 46,112	\$ 46,280	\$ 46,449	\$ 46,619	\$ 46,789

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

Staff Modified by APS plus AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
					0.000554							
					0.000554	0.000554	0.000554	0.000554	0.000554	0.000554	0.000554	0.000554
1		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
2												
	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 12,920	\$ 11,309	\$ 9,686	\$ 8,116	\$ 6,839	\$ 5,775
3												
4	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 1,659	\$ 1,664	\$ 1,605	\$ 1,307	\$ 1,089	\$ 1,118
5	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 47	\$ 41	\$ 35	\$ 30	\$ 25	\$ 21
6	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 11,309	\$ 9,686	\$ 8,116	\$ 6,839	\$ 5,775	\$ 4,678

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 6**

**Summary of 2006 Monthly Calculations  
Staff Modified by APS plus AECC Proposal (updated) with Surchage Step 1 effective May - 2/28/06 Market**  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (37,372)	\$ 6	\$ 58,129	\$ 115,604	\$ 147,614	\$ 160,161	\$ 64,827
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ (136)	\$ -	\$ 212	\$ 422	\$ 539	\$ 585	\$ 237
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,276)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ (85,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (93,641)	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (37,372)	\$ 6	\$ 58,129	\$ 115,604	\$ 147,614	\$ 160,161	\$ 64,827	\$ 65,479
4.5 Tracking Account Surchage	\$ -	\$ -	\$ -	\$ -	\$ 76,439	\$ 65,980	\$ 53,309	\$ 40,553	\$ 28,207	\$ 18,137	\$ 96,768	\$ 81,648
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,861	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 45,944	\$ 46,112	\$ 46,280	\$ 46,449	\$ 46,619
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 167	\$ 168	\$ 168	\$ 169	\$ 170	\$ 170
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 45,944	\$ 46,112	\$ 46,280	\$ 46,449	\$ 46,619	\$ 46,789
<b>Surchage Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 12,920	\$ 11,309	\$ 9,686	\$ 8,116	\$ 6,839	\$ 5,775
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 47	\$ 41	\$ 35	\$ 30	\$ 25	\$ 21
15 Less Revenue from Applicable Surchage Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 1,659	\$ 1,664	\$ 1,605	\$ 1,307	\$ 1,089	\$ 1,118
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 11,309	\$ 9,686	\$ 8,116	\$ 6,839	\$ 5,775	\$ 4,678
18 Combined Balance (Ln. 4, 4.5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 180,313	\$ 196,408	\$ 228,699	\$ 260,169	\$ 267,018	\$ 259,085	\$ 233,723	\$ 210,330
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 659	\$ 717	\$ 835	\$ 950	\$ 975	\$ 946	\$ 853

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

Staff Modified by APS plus AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1	0.000000	0.000000	0.000000	0.000000	0.004312	0.004312	0.004312	0.004312	0.004312	0.004312	0.003357	0.007669
2		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3					\$ 85,000	\$ 76,439	\$ 65,980	\$ 53,309	\$ 40,553	\$ 28,207	\$ 111,778	\$ 96,768
4	\$ -	\$ -	\$ -	\$ -	\$ 8,561	\$ 10,737	\$ 12,913	\$ 12,950	\$ 12,494	\$ 10,172	\$ 15,077	\$ 15,473
5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 279	\$ 241	\$ 195	\$ 148	\$ 103	\$ 66	\$ 353
6	\$ -	\$ -	\$ -	\$ -	\$ 76,439	\$ 65,980	\$ 53,309	\$ 40,553	\$ 28,207	\$ 18,137	\$ 96,768	\$ 81,648

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

Staff Proposal as Modified by APS with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and System Book <sup>4</sup> Purchased Power Costs (MWh)	(e) Off-System Sales Revenue	(f) Net Native Load Power Supply Cost (d - e)	(g) PSA Retail <sup>5</sup> Power Supply Cost (a/c * f)	(h) Base Rate <sup>6</sup> Power Supply Cost (a * Base Rate)	(i) Pre 90/10 Sharing (Over)/Under Collection (g - h)	(j) Post 90/10 Sharing (Over)/Under Collection (i * 0.9)	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,469	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 66,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ -	\$ 108	\$ 47,629
6	June	2,731,374	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ 174	\$ 85,316
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ 311	\$ 143,751
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 525	\$ 168,215
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 614	\$ 200,417
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 732	\$ 213,156
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 778	\$ 67,369
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 246	\$ 68,030
12.5													\$ 248	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 268,960	\$ 242,064	\$ 177,611	\$ 3,825	\$ 68,278
14	Interest Rate <sup>7</sup>													

4.38%

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments. Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

<sup>5</sup> Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>6</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>7</sup> Base Rate Power Supply Cost is \$0.20743/kWh from January through December.

<sup>8</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

Exb. 18-C Page 1

ARIZONA PUBLIC SERVICE COMPANY

Schedule 3

2006 Annual Adjustor Account

Staff Proposal as Modified by APS with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>		1,936,737	1,838,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,086	1,965,969	2,017,608	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Line 3 + Line 4) * [4.38% / 12]) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

Staff Proposal as Modified by APS with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge				\$ 15,292			\$ 44,562					
3 Monthly Interest (Line 1 * [4.38% / 12]) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

Staff Proposal as Modified by APS with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
					0.000554	0.000554	0.001611					
1					0.000554		0.002165	0.002165	0.002165	0.002165	0.002165	0.002165
2		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 184	\$ 142	\$ 123	\$ 108
6	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 6**

**Summary of 2006 Monthly Calculations**

**Staff Proposal as Modified by APS with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market**

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 47,628	\$ 85,316	\$ 143,750	\$ 168,214	\$ 200,416	\$ 213,156	\$ 67,369
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ 174	\$ 311	\$ 525	\$ 614	\$ 732	\$ 778	\$ 246
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (33,324)	\$ -	\$ -	\$ (144,287)	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 47,628	\$ 85,316	\$ 143,750	\$ 168,214	\$ 200,416	\$ 213,156	\$ 67,369	\$ 68,030
4.5 Tracking Account Surcharge	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,711	\$ 26,334	\$ 23,592	\$ 155,430	\$ 143,133
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,884	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,666
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,666	\$ 25,426
18 Combined Balance (Ln. 4, 4.5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 188,875	\$ 215,738	\$ 256,187	\$ 292,257	\$ 303,563	\$ 299,298	\$ 273,457	\$ 249,567
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 690	\$ 787	\$ 935	\$ 1,067	\$ 1,108	\$ 1,082	\$ 998

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

Staff Proposal as Modified by APS with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market  
(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
1	Tracking Account Surcharge Rate (\$/kWh)	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001203	0.001203	0.001203	0.005173	0.006376
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	
3	Beginning Balance												
4	Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,613	\$ 3,486	\$ 2,838	\$ 12,535	\$ 12,864
5	Monthly Interest (Ln. 3) * (4.38% / 12) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 108	\$ 96	\$ 86	\$ 567
6	Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,711	\$ 26,334	\$ 23,592	\$ 155,430	\$ 143,133

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

No Relief, other than Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and System <sup>4</sup> Purchased Power Costs Sales Revenue	(e) Off-System Sales Revenue	(f) Net Native Load Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
				(a + b)	(d - e)	(a/c * f)	(a * Base Rate)	(g - h)	(i * 0.9)					
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
5	May	2,382,657	78,278	2,460,936			\$ 71,065	\$ 68,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ -	\$ 108	\$ 47,629
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ 174	\$ 85,316
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ 311	\$ 143,751
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 525	\$ 201,539
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 736	\$ 233,862
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 854	\$ 246,724
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 901	\$ 245,346
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 896	\$ 246,657
12.5													\$ 900	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 268,960	\$ 242,064	\$ -	\$ 5,493	\$ 247,557
14	Interest Rate <sup>7</sup>													

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

<sup>5</sup> Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>6</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>7</sup> Base Rate Power Supply Cost is \$.020743/kWh from January through December.

<sup>8</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

Exb. 18-D

**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 3**

**2006 Annual Adjustor Account**

**No Relief, other than Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market**

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Ln. 3 + Line 4) * (4.38% / 12)) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

No Relief, other than Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
1	Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2	Amounts Removed due to Authorized Surcharge				\$ 15,292			\$ 44,562					
3	Monthly Interest (Line 1 * (4.38% / 12)) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4	Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 5**

**2006 Surcharge Account**

**No Relief, other than Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market**  
(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
	New Additions to Surcharge Rate (\$/kWh)					0.000554		0.001611					
1	Surcharge Rate (\$/kWh)					0.000554	0.000554	0.002165	0.002165	0.002165	0.002165	0.002165	0.002165
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	-	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,086	1,965,969	2,017,808
3	Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4	Less: Revenue from Surcharge Rate (Line 1 * Line 2)	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5	Monthly Interest (Line 3 * (4.38% / 12)) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6	Ending Balance with Interest (Line 3 - Line 4 + Line 5)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations

No Relief, other than Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 47,628	\$ 85,316	\$ 143,750	\$ 201,538	\$ 233,862	\$ 246,724	\$ 245,347
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ 174	\$ 311	\$ 525	\$ 736	\$ 854	\$ 901	\$ 896
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 56,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 47,628	\$ 85,316	\$ 143,750	\$ 201,538	\$ 233,862	\$ 246,724	\$ 245,347	\$ 246,658
<b>4.5 Tracking Account Surcharge</b>												
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
18 Combined Balance (Ln. 4, 4.5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 188,875	\$ 215,738	\$ 256,187	\$ 295,870	\$ 310,675	\$ 309,274	\$ 296,005	\$ 285,062
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 690	\$ 787	\$ 935	\$ 1,080	\$ 1,134	\$ 1,129	\$ 1,081

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

No Relief, other than Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
1	Tracking Account Surcharge Rate (\$/kWh)	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	
3	Beginning Balance												
4	Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	Monthly Interest ([Line 3] * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

**ARIZONA PUBLIC SERVICE COMPANY**  
**Schedule 1**  
**2006 Annual Tracking Account**  
**AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market**  
(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and System Purchased Power Costs (MWh)	(e) Off-System Sales Revenue	(f) Net Native Load Power Supply Cost	(g) PSA Retail <sup>4</sup> Power Supply Cost	(h) Base Rate <sup>5</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
				(a + b)			(d - e)	(a/c * f)	(a * Base Rate)	(g - h)	(j * 0.9)			
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,878,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ 85,000	\$ 108	\$ (37,371)
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ (136)	\$ 6
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ 0	\$ 58,129
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 212	\$ 115,604
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 422	\$ 147,614
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 539	\$ 180,161
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 585	\$ 158,468
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 578	\$ 159,461
12.5													\$ 582	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 268,960	\$ 242,084	\$ 85,000	\$ 2,979	\$ 160,043
14	Interest Rate <sup>7</sup>													

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments. Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

<sup>5</sup> Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>6</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>7</sup> Base Rate Power Supply Cost is \$0.020743/kWh from January through December.

<sup>8</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

18-E

ARIZONA PUBLIC SERVICE COMPANY

Schedule 3

2006 Annual Adjustor Account

AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,288	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Ln. 3 + Ln. 4) * (4.38% / 12)) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY  
Schedule 4  
2006 Paragraph 19d Balancing Account  
AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 45,944	\$ 46,112	\$ 46,280	\$ 46,449	\$ 46,619
2 Amounts Removed due to Authorized Surcharge				\$ 15,292								
3 Monthly Interest (Line 1 * (4.38% / 12)) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 167	\$ 168	\$ 168	\$ 169	\$ 170	\$ 170
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 45,944	\$ 46,112	\$ 46,280	\$ 46,449	\$ 46,619	\$ 46,789

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
1	New Additions to Surcharge Rate (\$/kWh) Surcharge Rate (\$/kWh)					0.000554 0.000554	0.000554	0.000554	0.000554	0.000554	0.000554	0.000554	0.000554
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 12,920	\$ 11,309	\$ 9,686	\$ 8,116	\$ 6,839	\$ 5,775
4	Less: Revenue from Surcharge Rate (Line 1 * Line 2)	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 1,659	\$ 1,664	\$ 1,605	\$ 1,307	\$ 1,089	\$ 1,118
5	Monthly Interest (Line 3 * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 47	\$ 41	\$ 35	\$ 30	\$ 25	\$ 21
6	Ending Balance with Interest (Line 3 - Line 4 + Line 5)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 11,309	\$ 9,686	\$ 8,116	\$ 6,839	\$ 5,775	\$ 4,678

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations

AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (37,372)	\$ 6	\$ 58,129	\$ 115,604	\$ 147,614	\$ 160,161	\$ 158,468
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ (136)	\$ -	\$ 212	\$ 422	\$ 539	\$ 585	\$ 578
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ (85,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (37,372)	\$ 6	\$ 58,129	\$ 115,604	\$ 147,614	\$ 160,161	\$ 158,468	\$ 159,461
4.5 Tracking Account Surcharge	\$ -	\$ -	\$ -	\$ -	\$ 76,439	\$ 65,980	\$ 53,309	\$ 40,553	\$ 28,207	\$ 18,137	\$ 9,726	\$ 1,062
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 45,944	\$ 46,112	\$ 46,280	\$ 46,449	\$ 46,619
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 167	\$ 168	\$ 168	\$ 169	\$ 170	\$ 170
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 45,944	\$ 46,112	\$ 46,280	\$ 46,449	\$ 46,619	\$ 46,789
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 12,920	\$ 11,309	\$ 9,686	\$ 8,116	\$ 6,839	\$ 5,775
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 47	\$ 41	\$ 35	\$ 30	\$ 25	\$ 21
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 1,659	\$ 1,664	\$ 1,605	\$ 1,307	\$ 1,089	\$ 1,118
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 11,309	\$ 9,686	\$ 8,116	\$ 6,839	\$ 5,775	\$ 4,678
18 Combined Balance (Ln. 4, 4.5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 180,313	\$ 196,408	\$ 228,699	\$ 260,169	\$ 267,018	\$ 259,085	\$ 240,322	\$ 223,726
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 659	\$ 717	\$ 835	\$ 950	\$ 975	\$ 946	\$ 877

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

AECC Proposal (updated) with Surcharge Step 1 effective May - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Tracking Account Surcharge Rate (\$/kWh)	0.0000	0.0000	0.0000	0.0000	0.004312	0.004312	0.004312	0.004312	0.004312	0.004312	0.004312	0.004312
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3 Beginning Balance					\$ 85,000	\$ 76,439	\$ 65,980	\$ 53,309	\$ 40,553	\$ 28,207	\$ 18,137	\$ 9,726
4 Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ -	\$ 8,561	\$ 10,737	\$ 12,913	\$ 12,950	\$ 12,494	\$ 10,172	\$ 8,477	\$ 8,700
5 Monthly Interest (Ln. 3) * (4.38% / 12) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 279	\$ 241	\$ 195	\$ 148	\$ 103	\$ 66	\$ 36
6 Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ -	\$ 76,439	\$ 65,980	\$ 53,309	\$ 40,553	\$ 28,207	\$ 18,137	\$ 9,726	\$ 1,062

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

4 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and Purchased Power Costs	(e) Off-System Sales Revenue	(f) Native Load Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
				(a + b)			(d - e)	(a/c * f)	(a * Base Rate)	(g - h)	(i * 0.9)			
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ -	\$ 108	\$ 47,629
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ 174	\$ 85,316
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ 311	\$ 143,751
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 525	\$ 201,539
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 736	\$ 233,862
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 854	\$ 246,724
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 901	\$ 245,346
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 896	\$ 246,657
12.5													\$ 900	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 268,960	\$ 242,064	\$ -	\$ 5,493	\$ 247,557
14	Interest Rate <sup>7</sup>													

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>5</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>6</sup> Base Rate Power Supply Cost is \$.020743/kWh from January through December.

<sup>7</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

18-F

ARIZONA PUBLIC SERVICE COMPANY

Schedule 3

2006 Annual Adjustor Account

4 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhrs)		1,936,737	1,936,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,288	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Line 3 + Line 4) * [4.38% / 12]) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

4 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge					\$ 15,292		\$ 44,562					
3 Monthly Interest (Line 1 * [4.38% / 12]) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

4 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
New Additions to Surcharge Rate (\$/kWh)					0.000554		0.001611					
1 Surcharge Rate (\$/kWh)					0.000554	0.000554	0.002165	0.002165	0.002165	0.002165	0.002165	0.002165
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	-	1,936,737	1,836,348	1,788,435	1,965,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4 Less: Revenue from Surcharge Rate (Line 1 * Line 2)	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5 Monthly Interest (Line 3 * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6 Ending Balance with Interest (Line 3 - Line 4 + Line 5)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations

4 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 47,628	\$ 85,316	\$ 143,750	\$ 201,538	\$ 233,862	\$ 246,724	\$ 245,347
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ 174	\$ 311	\$ 525	\$ 736	\$ 854	\$ 901	\$ 896
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,568	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 47,628	\$ 85,316	\$ 143,750	\$ 201,538	\$ 233,862	\$ 246,724	\$ 245,347	\$ 246,558
4.5 Tracking Account Surcharge	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
18 Combined Balance (Ln. 4, 5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 188,875	\$ 215,738	\$ 256,187	\$ 295,870	\$ 310,675	\$ 309,274	\$ 296,005	\$ 285,062
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 690	\$ 787	\$ 935	\$ 1,080	\$ 1,134	\$ 1,129	\$ 1,081

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

4 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
1	Tracking Accounting Surcharge Rate (\$/kWh)	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	Monthly Interest ((Line 3) * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

5 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and System Book <sup>4</sup> Purchased Power Costs (MWh)	(e) Off-System Sales Revenue	(f) Net Native Load Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,957	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ 27,604	\$ 108	\$ 20,025
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ 73	\$ 57,612
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ 210	\$ 115,945
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 423	\$ 173,631
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 634	\$ 205,853
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 751	\$ 218,612
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 798	\$ 217,132
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 793	\$ 218,340
12.5	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 268,960	\$ 242,064	\$ 27,604	\$ 4,677	\$ 219,137
13	Interest Rate <sup>7</sup>													
14														

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>5</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>6</sup> Base Rate Power Supply Cost is \$.020743/kWh from January through December.

<sup>7</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

18-C

**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 3**

**2006 Annual Adjustor Account**

**5 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market**

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1	Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3	Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4	Revenue True-up from January Estimate <sup>2</sup>													
5	Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6	Monthly Interest ((Ln. 3 + Ln. 4) * [4.38% / 12]) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 282	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7	Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

5 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge				\$ 15,292			\$ 44,562					
3 Monthly Interest (Line 1 * [4.38% / 12]) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

5 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
New Additions to Surcharge Rate (\$/kWh)					0.000554		0.001611					
1 Surcharge Rate (\$/kWh)					0.000554	0.000554	0.002165	0.002165	0.002165	0.002165	0.002165	0.002165
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	-	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4 Less: Revenue from Surcharge Rate (Line 1 * Line 2)	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5 Monthly Interest (Line 3 * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6 Ending Balance with Interest (Line 3 - Line 4 + Line 5)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations

5 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 20,024	\$ 57,611	\$ 115,944	\$ 173,630	\$ 205,852	\$ 218,611	\$ 217,131
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ 73	\$ 210	\$ 423	\$ 634	\$ 751	\$ 798	\$ 793
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ (27,604)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ 20,024	\$ 57,611	\$ 115,944	\$ 173,630	\$ 205,852	\$ 218,611	\$ 217,131	\$ 218,339
4.5 Tracking Account Surcharge	\$ -	\$ -	\$ -	\$ -	\$ 25,619	\$ 23,222	\$ 20,312	\$ 17,383	\$ 14,549	\$ 12,243	\$ 10,322	\$ 8,342
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,582)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
18 Combined Balance (Ln. 4, 5, 8, 12, 17)	\$ 172,898	\$ 169,684	\$ 171,451	\$ 179,463	\$ 186,889	\$ 211,255	\$ 248,693	\$ 285,345	\$ 297,214	\$ 293,404	\$ 278,111	\$ 265,085
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 682	\$ 771	\$ 908	\$ 1,042	\$ 1,084	\$ 1,071	\$ 1,016

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

5 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1	0.000000	0.000000	0.000000	0.000000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
2		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,984,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3					\$ 27,604	\$ 25,619	\$ 23,222	\$ 20,312	\$ 17,383	\$ 14,549	\$ 12,243	\$ 10,322
4	\$ -	\$ -	\$ -	\$ -	\$ 1,985	\$ 2,490	\$ 2,985	\$ 3,003	\$ 2,898	\$ 2,359	\$ 1,966	\$ 2,018
5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94	\$ 85	\$ 74	\$ 63	\$ 53	\$ 45	\$ 38
6	\$ -	\$ -	\$ -	\$ -	\$ 25,619	\$ 23,222	\$ 20,312	\$ 17,383	\$ 14,549	\$ 12,243	\$ 10,322	\$ 8,342

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

6 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and Purchased Power Costs	(e) Off-System Sales Revenue	(f) Net Power Supply Cost	(g) PSA Retail <sup>4</sup> Power Supply Cost	(h) Base Rate <sup>5</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
				(a + b)			(d - e)	(a/c * f)	(a * Base Rate)	(g - h)	(j * 0.9)			
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ 55,208	\$ 108	\$ (7,579)
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ (28)	\$ 29,907
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ 109	\$ 88,139
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 322	\$ 145,724
9	September	2,803,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 532	\$ 177,844
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 649	\$ 190,501
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 695	\$ 188,918
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 690	\$ 190,023
12.5													\$ 694	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 268,960	\$ 242,064	\$ 55,208	\$ 3,860	\$ 190,716
14	Interest Rate <sup>7</sup>													

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>5</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>6</sup> Base Rate Power Supply Cost is \$.020743/kWh from January through December.

<sup>7</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

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ARIZONA PUBLIC SERVICE COMPANY

Schedule 3

2006 Annual Adjustor Account

6 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhrs) <sup>1</sup>		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Ln. 3 + Ln. 4) * (4.38% / 12)) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

6 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge					\$ 15,292		\$ 44,562					
3 Monthly Interest (Line 1 * (4.38% / 12)) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 186	\$ 186	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

6 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
					0.000554	0.000554	0.001611	0.002165	0.002165	0.002165	0.002165	0.002165
1 New Additions to Surcharge Rate (\$/kWh) Surcharge Rate (\$/kWh)					0.000554	0.000554	0.001611	0.002165	0.002165	0.002165	0.002165	0.002165
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	-	1,936,737	1,836,348	1,789,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4 Less: Revenue from Surcharge Rate (Line 1 * Line 2)	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5 Monthly Interest (Line 3 * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6 Ending Balance with Interest (Line 3 - Line 4 + Line 5)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 6**

**Summary of 2006 Monthly Calculations**

**6 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market**  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ -	\$ 2,697	\$ 15,126	\$ 29,721	\$ (7,580)	\$ 29,906	\$ 88,138	\$ 145,723	\$ 177,843	\$ 190,500	\$ 188,917
2 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ 10	\$ 55	\$ 108	\$ (28)	\$ 109	\$ 322	\$ 532	\$ 649	\$ 695	\$ 690
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ (55,208)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,569	\$ 15,126	\$ 29,721	\$ (7,580)	\$ 29,906	\$ 88,138	\$ 145,723	\$ 177,843	\$ 190,500	\$ 188,917	\$ 190,022
4.5 Tracking Account Surcharge	\$ -	\$ -	\$ -	\$ -	\$ 51,237	\$ 46,444	\$ 40,624	\$ 34,766	\$ 29,098	\$ 24,486	\$ 20,643	\$ 16,683
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,435	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
18 Combined Balance (Ln. 4, 4.5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 184,904	\$ 206,772	\$ 241,199	\$ 274,821	\$ 283,754	\$ 277,536	\$ 260,218	\$ 245,110
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 675	\$ 755	\$ 881	\$ 1,003	\$ 1,036	\$ 1,013	\$ 950

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

6 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
1	Tracking Account Surcharge Rate (\$/kWh)	0.000000	0.000000	0.000000	0.000000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance					\$ 55,208	\$ 51,237	\$ 46,444	\$ 40,624	\$ 34,766	\$ 29,098	\$ 24,486	\$ 20,643
4	Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ -	\$ 3,971	\$ 4,980	\$ 5,989	\$ 6,007	\$ 5,795	\$ 4,718	\$ 3,932	\$ 4,035
5	Monthly Interest ([Line 3] * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 187	\$ 170	\$ 148	\$ 127	\$ 106	\$ 89	\$ 75
6	Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ -	\$ 51,237	\$ 46,444	\$ 40,624	\$ 34,766	\$ 29,098	\$ 24,486	\$ 20,643	\$ 16,683

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

7 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and Purchased Power Costs	(e) Off-System Sales Revenue	(f) Net Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,828	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085	\$ 49,832	\$ 4,915	\$ 44,917	\$ 42,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829	\$ 49,832	\$ 4,915	\$ 44,917	\$ 42,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
5	May	2,362,657	78,278	2,440,936	\$ 57,034	\$ 5,703	\$ 51,331	\$ 49,009	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
6	June	2,731,974	81,579	2,813,553	\$ 71,065	\$ 7,106	\$ 63,959	\$ 61,853	\$ 49,009	\$ 19,777	\$ 17,799	\$ 82,812	\$ 108	\$ (35,183)
7	July	3,185,559	94,760	3,280,318	\$ 101,288	\$ 10,128	\$ 91,160	\$ 88,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ (128)	\$ 2,202
8	August	3,143,508	79,190	3,222,698	\$ 134,546	\$ 13,454	\$ 121,092	\$ 117,638	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ 8	\$ 60,333
9	September	2,603,844	69,796	2,673,640	\$ 91,499	\$ 9,149	\$ 82,350	\$ 79,201	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 220	\$ 117,816
10	October	2,128,552	63,607	2,192,159	\$ 59,213	\$ 5,921	\$ 53,292	\$ 51,371	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 430	\$ 149,834
11	November	1,895,524	79,817	1,975,341	\$ 38,337	\$ 3,833	\$ 34,504	\$ 33,671	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 547	\$ 162,389
12	December	2,171,928	64,166	2,236,094	\$ 46,857	\$ 4,685	\$ 42,172	\$ 40,487	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 593	\$ 160,704
12.5													\$ 590	\$ 161,706
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 86,709	\$ 84,448	\$ 573,488	\$ 268,960	\$ 242,064	\$ 82,812	\$ 3,044	\$ 162,296
14	Interest Rate <sup>7</sup>													

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

<sup>5</sup> Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>6</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>7</sup> Base Rate Power Supply Cost is \$ 0.020743/kWh from January through December.

<sup>8</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

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**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 3**

**2006 Annual Adjustor Account**

**7 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market**

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,984,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	2,133,824
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest (Ln. 3 + Ln. 4) * [4.38% / 12] <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

7 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge				\$ 15,292			\$ 44,562					
3 Monthly Interest (Line 1 * (4.38% / 12)) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

7 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1	New Additions to Surcharge Rate (\$/kWh)											
					0.000554	0.000554	0.001611	0.002165	0.002165	0.002165	0.002165	0.002165
1	Surcharge Rate (\$/kWh)											
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)											
	-	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance											
	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4	Less: Revenue from Surcharge Rate (Line 1 * Line 2)											
	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5	Monthly Interest (Line 3 * [4.38% / 12]) <sup>1</sup>											
	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6	Ending Balance with Interest (Line 3 - Line 4 + Line 5)											
	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations

7 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (35,184)	\$ 2,202	\$ 60,333	\$ 117,816	\$ 149,834	\$ 162,389	\$ 160,704
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ (126)	\$ 8	\$ 220	\$ 430	\$ 547	\$ 593	\$ 587
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ (82,812)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (35,184)	\$ 2,202	\$ 60,333	\$ 117,816	\$ 149,834	\$ 162,389	\$ 160,704	\$ 161,706
<b>4.5 Tracking Account Surcharge</b>												
5 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 76,856	\$ 69,666	\$ 60,936	\$ 52,149	\$ 43,647	\$ 36,729	\$ 30,965	\$ 25,025
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 38,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,463	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
<b>18 Combined Balance (Ln. 4, 4.5, 8, 12, 17)</b>												
	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 182,918	\$ 202,290	\$ 233,706	\$ 264,297	\$ 270,294	\$ 261,668	\$ 242,327	\$ 225,135
<b>19 Combined Monthly Interest (Ln. 2, 6, 10, 14)</b>												
	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 668	\$ 738	\$ 853	\$ 965	\$ 987	\$ 955	\$ 885

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

7 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1	0.000000	0.000000	0.000000	0.000000	0.003000	0.003000	0.003000	0.003000	0.003000	0.003000	0.003000	0.003000
2	1,936,737	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,808
3					\$ 82,812	\$ 76,856	\$ 69,666	\$ 60,936	\$ 52,149	\$ 43,647	\$ 36,729	\$ 30,965
4	\$ -	\$ -	\$ -	\$ -	\$ 5,956	\$ 7,470	\$ 8,984	\$ 9,010	\$ 8,693	\$ 7,077	\$ 5,898	\$ 6,053
5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 281	\$ 254	\$ 222	\$ 190	\$ 159	\$ 134	\$ 113
6	\$ -	\$ -	\$ -	\$ -	\$ 76,856	\$ 69,666	\$ 60,936	\$ 52,149	\$ 43,647	\$ 36,729	\$ 30,965	\$ 25,025

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

8 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and System Book <sup>4</sup> Purchased Power Costs Sales Revenue	(e) Off-System Sales Revenue	(f) Net Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing (Over)/Under Collection	(j) Post 90/10 Sharing (Over)/Under Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,828	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085	\$ 49,832	\$ 4,915	\$ 44,917	\$ 42,902	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829	\$ 49,832	\$ 4,915	\$ 44,917	\$ 42,902	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936	\$ 71,065	\$ 7,106	\$ 63,959	\$ 60,853	\$ 49,009	\$ 19,777	\$ 17,799	\$ 110,416	\$ 108	\$ (62,787)
6	June	2,731,974	81,579	2,813,553	\$ 101,288	\$ 10,129	\$ 91,159	\$ 88,030	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ (229)	\$ (25,503)
7	July	3,185,559	94,760	3,280,318	\$ 134,546	\$ 13,455	\$ 121,091	\$ 117,636	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ (93)	\$ 32,527
8	August	3,143,508	79,190	3,222,698	\$ 132,076	\$ 12,807	\$ 119,269	\$ 116,462	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 119	\$ 89,909
9	September	2,603,844	69,796	2,673,640	\$ 91,499	\$ 9,150	\$ 82,349	\$ 79,199	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 328	\$ 121,825
10	October	2,128,552	63,607	2,192,159	\$ 59,213	\$ 5,921	\$ 53,292	\$ 50,371	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 445	\$ 134,278
11	November	1,895,524	79,817	1,975,341	\$ 38,337	\$ 3,834	\$ 34,503	\$ 33,669	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 490	\$ 132,490
12	December	2,171,928	64,166	2,236,094	\$ 46,857	\$ 4,686	\$ 42,171	\$ 40,485	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 484	\$ 133,389
12.5													\$ 487	
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 86,709	\$ 84,448	\$ 573,488	\$ 268,960	\$ 242,054	\$ 110,416	\$ 2,227	\$ 133,875
14	Interest Rate <sup>7</sup>													

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>5</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>6</sup> Base Rate Power Supply Cost is \$.020743/kWh from January through December.

<sup>7</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 3

2006 Annual Adjustor Account

8 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Line 3 + Line 4) * [4.38% / 12]) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

8 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge					\$ 15,292		\$ 44,562					
3 Monthly Interest (Line 1 * [4.38% / 12]) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

8 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
					0.000554	0.000554	0.001611					
					0.000554		0.002165	0.002165	0.002165	0.002165	0.002165	0.002165
1												
2	-	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2008 Monthly Calculations

8 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (62,788)	\$ (25,503)	\$ 32,527	\$ 89,909	\$ 121,825	\$ 134,278	\$ 132,490
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ (229)	\$ (93)	\$ 119	\$ 328	\$ 445	\$ 490	\$ 484
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ (110,416)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (62,788)	\$ (25,503)	\$ 32,527	\$ 89,909	\$ 121,825	\$ 134,278	\$ 132,490	\$ 133,389
4.5 Tracking Account Surcharge	\$ -	\$ -	\$ -	\$ -	\$ 102,474	\$ 92,888	\$ 81,248	\$ 69,532	\$ 58,196	\$ 48,972	\$ 41,287	\$ 33,367
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,428
18 Combined Balance (Ln. 4, 4.5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 180,933	\$ 197,807	\$ 226,212	\$ 253,773	\$ 256,834	\$ 245,800	\$ 224,435	\$ 205,160
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 661	\$ 722	\$ 826	\$ 926	\$ 938	\$ 897	\$ 820

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

8 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1	Tracking Accounting Surcharge Rate (\$/kWh)	0.000000	0.000000	0.000000	0.004000	0.004000	0.004000	0.004000	0.004000	0.004000	0.004000	0.004000
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance				\$ 110,416	\$ 102,474	\$ 92,888	\$ 81,248	\$ 69,532	\$ 58,196	\$ 48,972	\$ 41,287
4	Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
5	Monthly Interest ((Ln. 3) * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 374	\$ 339	\$ 297	\$ 254	\$ 212	\$ 179	\$ 151
6	Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ 102,474	\$ 92,888	\$ 81,248	\$ 69,532	\$ 58,196	\$ 48,972	\$ 41,287	\$ 33,367

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

9 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market  
(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MW/h)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MW/h)	(c) Native Load Energy Sales (MW/h)	(d) System <sup>3</sup> Purchased Power Costs	(e) Off-System Sales Revenue	(f) Net Native Load Power Supply Cost	(g) PSA Retail <sup>4</sup> Power Supply Cost	(h) Base Rate <sup>5</sup> Power Supply Cost	(i) Pre 90/10 Sharing Collection	(j) Post 90/10 Sharing Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ 10	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ 24	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ 55	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ 138,020	\$ 108	\$ (90,391)
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ (330)	\$ (53,207)
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ (194)	\$ 4,721
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ 17	\$ 62,002
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ 226	\$ 93,816
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ 342	\$ 106,166
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ 388	\$ 104,276
12	December	2,171,928	64,166	2,236,094			\$ 48,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ 384	\$ 105,072
12.5	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 268,960	\$ 242,064	\$ 138,020	\$ 1,411	\$ 105,455
13	Interest Rate <sup>7</sup>													
14														

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and PacifiCorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 87504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

<sup>5</sup> Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>6</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has been further examined in Docket No. E-01345A-06-0009.

<sup>7</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

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ARIZONA PUBLIC SERVICE COMPANY

Schedule 3

2006 Annual Adjustor Account

9 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1	Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>		1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,288	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3	Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4	Revenue True-up from January Estimate <sup>2</sup>													
5	Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6	Monthly Interest ([Line 3 + Line 4] * [4.38% / 12]) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7	Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

9 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge				\$ 15,292			\$ 44,562					
3 Monthly Interest (Line 1 * (4.38% / 12)) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 5

2006 Surcharge Account

9 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
	New Additions to Surcharge Rate (\$/kWh)					0.000554	0.000554	0.001611	0.002165	0.002165	0.002165	0.002165	0.002165
1	Surcharge Rate (\$/kWh)					0.000554	0.000554	0.002165	0.002165	0.002165	0.002165	0.002165	0.002165
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	-	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4	Less: Revenue from Surcharge Rate (Line 1 * Line 2)	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5	Monthly Interest (Line 3 * (4.38% / 12)) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6	Ending Balance with Interest (Line 3 - Line 4 + Line 5)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations  
9 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (90,392)	\$ (53,208)	\$ 4,721	\$ 62,001	\$ 93,815	\$ 106,165	\$ 104,275
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ (330)	\$ (194)	\$ 17	\$ 226	\$ 342	\$ 388	\$ 381
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ (138,020)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (90,392)	\$ (53,208)	\$ 4,721	\$ 62,001	\$ 93,815	\$ 106,165	\$ 104,275	\$ 105,071
<b>4.5 Tracking Account Surcharge</b>												
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,842	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,580	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,292)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
18 Combined Balance (Ln. 4, 5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 178,947	\$ 193,324	\$ 218,718	\$ 243,248	\$ 243,373	\$ 229,929	\$ 206,541	\$ 185,184
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 653	\$ 706	\$ 798	\$ 888	\$ 888	\$ 840	\$ 754

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

9 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.		January	February	March	April	May	June	July	August	September	October	November	December
1	Tracking Account Surcharge Rate (\$/kWh)	0.000000	0.000000	0.000000	0.000000	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)		1,936,737	1,838,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance					\$ 138,020	\$ 128,093	\$ 116,110	\$ 101,561	\$ 86,915	\$ 72,745	\$ 61,215	\$ 51,608
4	Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ -	\$ 9,927	\$ 12,451	\$ 14,973	\$ 15,016	\$ 14,488	\$ 11,795	\$ 9,830	\$ 10,088
5	Monthly Interest ([Line 3] * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 468	\$ 424	\$ 371	\$ 317	\$ 266	\$ 223	\$ 188
6	Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ -	\$ 128,093	\$ 116,110	\$ 101,561	\$ 86,915	\$ 72,745	\$ 61,215	\$ 51,608	\$ 41,709

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 1

2006 Annual Tracking Account

10 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	Month	(a) PSA Retail <sup>1</sup> Energy Sales (MWh)	(b) Native Load <sup>2</sup> Wholesale Energy Sales (MWh)	(c) Native Load Energy Sales (MWh)	(d) System <sup>3</sup> Book Fuel and System Purchased Power Costs Sales	(e) Off-System Sales Revenue	(f) Net Native Load Power Supply Cost	(g) PSA Retail <sup>5</sup> Power Supply Cost	(h) Base Rate <sup>6</sup> Power Supply Cost	(i) Pre 90/10 Sharing Collection	(j) Post 90/10 Sharing Collection	(k) Tracking Acct. Surcharge Authorized for Collection	(l) Interest (m * rate/12)	(m) Cumulative Amount (j + k + l + m)
1	January	1,973,106	59,892	2,032,998	\$ 50,733	\$ 5,474	\$ 45,258	\$ 43,925	\$ 40,928	\$ 2,997	\$ 2,697	\$ -	\$ -	\$ 2,697
2	February	1,717,598	64,909	1,782,507	\$ 45,695	\$ 4,245	\$ 41,451	\$ 39,941	\$ 35,628	\$ 4,313	\$ 3,882	\$ -	\$ -	\$ 6,589
3	March	1,853,941	74,143	1,928,085			\$ 49,832	\$ 47,915	\$ 38,456	\$ 9,459	\$ 8,513	\$ -	\$ -	\$ 15,126
4	April	1,879,071	64,758	1,943,829			\$ 57,034	\$ 55,134	\$ 38,978	\$ 16,156	\$ 14,540	\$ -	\$ -	\$ 29,721
5	May	2,362,657	78,278	2,440,936			\$ 71,065	\$ 68,786	\$ 49,009	\$ 19,777	\$ 17,799	\$ 165,624	\$ -	\$ (117,995)
6	June	2,731,974	81,579	2,813,553			\$ 101,288	\$ 98,351	\$ 56,669	\$ 41,682	\$ 37,514	\$ -	\$ -	\$ (80,912)
7	July	3,185,559	94,760	3,280,318			\$ 134,546	\$ 130,659	\$ 66,078	\$ 64,581	\$ 58,123	\$ -	\$ -	\$ (23,084)
8	August	3,143,508	79,190	3,222,698			\$ 132,076	\$ 128,831	\$ 65,206	\$ 63,625	\$ 57,263	\$ -	\$ -	\$ (34,094)
9	September	2,603,844	69,796	2,673,640			\$ 91,499	\$ 89,110	\$ 54,012	\$ 35,098	\$ 31,588	\$ -	\$ -	\$ 65,807
10	October	2,128,552	63,607	2,192,159			\$ 59,213	\$ 57,495	\$ 44,153	\$ 13,342	\$ 12,008	\$ -	\$ -	\$ 78,055
11	November	1,895,524	79,817	1,975,341			\$ 38,337	\$ 36,788	\$ 39,319	\$ (2,531)	\$ (2,278)	\$ -	\$ -	\$ 76,062
12	December	2,171,928	64,166	2,236,094			\$ 46,857	\$ 45,513	\$ 45,052	\$ 461	\$ 415	\$ -	\$ -	\$ 76,754
12.5														
13	Total	27,647,263	874,894	28,522,157	\$ 96,428	\$ 9,719	\$ 868,455	\$ 842,448	\$ 573,488	\$ 288,960	\$ 242,064	\$ 165,624	\$ 595	\$ 77,035
14	Interest Rate <sup>7</sup>													

<sup>1</sup> PSA Retail Energy Sales are the calendar month's kWh sales. Cumulative Retail Energy Sales under rate schedule E-36 were excluded from the PSA Calculations.

<sup>2</sup> Includes traditional sales-for-resale and Pacificorp supplemental sales.

<sup>3</sup> Includes native load and off-system fuel and purchased power costs less those costs associated with E-36, ISFSI and mark-to-market accounting adjustments.

Excludes net savings of \$784,000 per month associated with the Sundance units pursuant to Decision No. 67504.

<sup>4</sup> Includes off-system revenue less mark-to-market accounting adjustments.

Definitions of commonly used terms for this filing are included in the PSA Plan for Administration. Any new terms will be defined on this page.

<sup>5</sup> The maximum annual amount that can be used for the PSA calculation is \$776,200,000. However, Decision No. 68437 allows deferral of costs in excess of the cap until this issue has

been further examined in Docket No. E-01345A-06-0009.

<sup>6</sup> Base Rate Power Supply Cost is \$0.020743/kWh from January through December.

<sup>7</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

18-L

ARIZONA PUBLIC SERVICE COMPANY

Schedule 3

2006 Annual Adjustor Account

10 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/08 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December	2007 January
1 Annual Adjustor Rate (\$/kWh)	0.0000	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
2 Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs) <sup>1</sup>	1,936,737	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,288	2,897,508	2,359,096	1,965,969	2,017,608	2,133,624
3 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
4 Revenue True-up from January Estimate <sup>2</sup>													
5 Less Revenue from Applicable Adjustor Rate (Ln. 1 * Ln. 2)	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070	\$ 8,534
6 Monthly Interest ((Ln. 3 + Ln. 4) * [4.38% / 12]) <sup>3</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72	\$ 43
7 Ending Balance (Ln. 3 + Ln. 4 - Ln. 5 + Ln. 6)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736	\$ 3,244

<sup>1</sup> Sales amounts are for energy billed beginning the first billing cycle of February 2006.

<sup>2</sup> True-up is the result of using estimated revenue for January in the annual PSA Adjustor Rate Calculation because the actual amount was not available at the time of filing that schedule.

<sup>3</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 4

2006 Paragraph 19d Balancing Account

10 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,811	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
2 Amounts Removed due to Authorized Surcharge				\$ 15,292			\$ 44,562					
3 Monthly Interest (Line 1 * (4.38% / 12)) <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
4 Ending Balance (Ln. 1 - Ln. 2 + Ln. 3)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,811	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

**ARIZONA PUBLIC SERVICE COMPANY**

**Schedule 5**

**2006 Surcharge Account**

**10 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market**  
(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
					0.000554	0.000554	0.001611					
					0.000554		0.002165	0.002165	0.002165	0.002165	0.002165	0.002165
1												
2	-	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
4	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,380	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
5	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
6	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.



ARIZONA PUBLIC SERVICE COMPANY

Schedule 6

Summary of 2006 Monthly Calculations

10 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
<b>2006 Annual Tracking Account</b>												
1 Beginning Balance	\$ -	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (117,996)	\$ (80,913)	\$ (23,085)	\$ 34,094	\$ 65,806	\$ 78,054	\$ 76,061
2 Monthly Interest <sup>1</sup>	\$ -	\$ 10	\$ 24	\$ 55	\$ 108	\$ (431)	\$ (295)	\$ (64)	\$ 124	\$ 240	\$ 285	\$ 278
3 Post-Sharing (Over)/Under Collection (From Sch. 1)	\$ 2,697	\$ 3,882	\$ 8,513	\$ 14,540	\$ 17,799	\$ 37,514	\$ 58,123	\$ 57,263	\$ 31,588	\$ 12,008	\$ (2,278)	\$ 415
3.5 Amounts to be Collected with Special Charges	\$ -	\$ -	\$ -	\$ -	\$ (165,624)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 Ending Balance with Interest (Ln. 1 + Ln. 2 + Ln. 3 + Ln. 3.5)	\$ 2,697	\$ 6,589	\$ 15,126	\$ 29,721	\$ (117,996)	\$ (80,913)	\$ (23,085)	\$ 34,094	\$ 65,806	\$ 78,054	\$ 76,061	\$ 76,754
4.5 Tracking Account Surcharge	\$ -	\$ -	\$ -	\$ -	\$ 153,711	\$ 139,331	\$ 121,873	\$ 104,298	\$ 87,294	\$ 73,458	\$ 61,930	\$ 50,050
<b>Annual Adjustor Account</b>												
5 Beginning Balance	\$ 109,724	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735
6 Monthly Interest <sup>1</sup>	\$ 400	\$ 402	\$ 375	\$ 350	\$ 325	\$ 297	\$ 262	\$ 219	\$ 176	\$ 134	\$ 100	\$ 72
7 Less Revenue from Applicable Adjustor Rate	\$ -	\$ 7,747	\$ 7,345	\$ 7,154	\$ 7,942	\$ 9,961	\$ 11,978	\$ 12,013	\$ 11,590	\$ 9,436	\$ 7,864	\$ 8,070
8 Ending Balance with Interest (Ln. 5 + Ln. 6 - Ln. 7)	\$ 110,124	\$ 102,779	\$ 95,809	\$ 89,005	\$ 81,388	\$ 71,725	\$ 60,008	\$ 48,214	\$ 36,800	\$ 27,498	\$ 19,735	\$ 11,736
<b>Paragraph 19d Balancing Account</b>												
9 Beginning Balance	\$ 59,858	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238
10 Monthly Interest <sup>1</sup>	\$ 218	\$ 219	\$ 220	\$ 221	\$ 166	\$ 166	\$ 4	\$ 4	\$ 4	\$ 4	\$ 5	\$ 5
11 Transfers to/from Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ (15,282)	\$ -	\$ (44,562)	\$ -	\$ -	\$ -	\$ -	\$ -
12 Ending Balance with Interest (Ln. 9 + Ln. 10 + Ln. 11)	\$ 60,077	\$ 60,296	\$ 60,516	\$ 60,737	\$ 45,611	\$ 45,777	\$ 1,220	\$ 1,224	\$ 1,229	\$ 1,233	\$ 1,238	\$ 1,242
<b>Surcharge Account</b>												
13 Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 15,292	\$ 14,248	\$ 57,482	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686
14 Monthly Interest <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ 52	\$ 210	\$ 187	\$ 164	\$ 142	\$ 123	\$ 108
15 Less Revenue from Applicable Surcharge Rate	\$ -	\$ -	\$ -	\$ -	\$ 1,100	\$ 1,360	\$ 6,483	\$ 6,502	\$ 6,273	\$ 5,107	\$ 4,256	\$ 4,368
16 Less Transfers to Other Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Ending Balance with Interest (Ln. 13 + Ln. 14 - Ln. 15 - Ln. 16)	\$ -	\$ -	\$ -	\$ -	\$ 14,248	\$ 12,920	\$ 51,209	\$ 44,894	\$ 38,785	\$ 33,819	\$ 29,686	\$ 25,426
18 Combined Balance (Ln. 4, 4.5, 8, 12, 17)	\$ 172,898	\$ 169,664	\$ 171,451	\$ 179,463	\$ 178,962	\$ 188,841	\$ 211,225	\$ 232,724	\$ 229,913	\$ 214,061	\$ 188,649	\$ 165,209
19 Combined Monthly Interest (Ln. 2, 6, 10, 14)	\$ 619	\$ 631	\$ 619	\$ 626	\$ 655	\$ 646	\$ 690	\$ 771	\$ 849	\$ 839	\$ 781	\$ 689

<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

ARIZONA PUBLIC SERVICE COMPANY

Schedule 7

2006 Tracking Account Surcharge

10 mill Hatch-Miller Request with Surcharge Step 1 effective May, Step 2 effective July - 2/28/06 Market

(\$ in thousands)

Line No.	January	February	March	April	May	June	July	August	September	October	November	December
1	Tracking Account Surcharge Rate (\$/kWh)	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	Retail Billed Sales Excluding E-3, E-4, E-36 Sales (MWhs)	1,936,737	1,836,348	1,788,435	1,985,474	2,490,130	2,994,552	3,003,268	2,897,508	2,359,096	1,965,969	2,017,608
3	Beginning Balance				\$ 165,624	\$ 153,711	\$ 139,331	\$ 121,873	\$ 104,298	\$ 87,294	\$ 73,458	\$ 61,930
4	Less Revenue from Applicable Rate (Ln. 1 * Ln. 2)	\$ -	\$ -	\$ -	\$ 11,913	\$ 14,941	\$ 17,967	\$ 18,020	\$ 17,385	\$ 14,155	\$ 11,796	\$ 12,106
5	Monthly Interest ((Line 3) * [4.38% / 12]) <sup>1</sup>	\$ -	\$ -	\$ -	\$ -	\$ 561	\$ 509	\$ 445	\$ 381	\$ 319	\$ 268	\$ 226
6	Ending Balance (Ln. 3 - Ln. 4 + Ln. 5)	\$ -	\$ -	\$ -	\$ 153,711	\$ 139,331	\$ 121,873	\$ 104,298	\$ 87,294	\$ 73,458	\$ 61,930	\$ 50,050

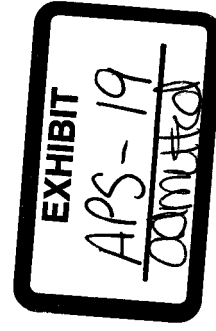
<sup>1</sup> Based on one-year Nominal Treasury Constant Maturities rate contained in the Federal Reserve Statistical Release, H-15.

# Hatch-Miller Scenarios to Increase 2006 PSA Adjuster (Assumed to be Implemented May 1, 2006) With Quarterly Surcharges (\$m)

	2006 PSA Revenue	2006 FFO	2006 Avg. Total Debt	2006 FFO to Debt	2006 Net Cash Flow	2006 Capital Expenditures	2006 NCF as a % of Cap Exp	12/31/2006 Deferred Fuel (ACC Juris.)
<b>Current rates incl. 2/06 4 mil adjuster, &amp; APS May 1 and July 1 surcharges, &amp; Sept. 1 and Dec. 1 surcharges (2/28/06 prices &amp; extended PV outage)</b>	\$ 160 (1)	\$ 532	\$ 3,252	16.4%	\$ 362	\$ 649	56%	\$ 263
<b>Add an additional 1 mil to adjuster May 1 Change in quarterly surcharge revenues Results with adjuster at 5 mils May 1</b>	20 (9)	12 (5)	(6) 3		12 (5)			(20) 9
<b>Add an additional 1 mil to adjuster May 1 Change in quarterly surcharge revenues Results with adjuster at 6 mils May 1</b>	20 (4)	12 (2)	(6) 1		12 (2)			(20) 4
<b>Add an additional 1 mil to adjuster May 1 Change in quarterly surcharge revenues Results with adjuster at 7 mils May 1</b>	205 (2)	560 (1)	3,244 1	16.9%	379 (1)	649	58%	236 (20) 2
<b>Add an additional 1 mil to adjuster May 1 Change in quarterly surcharge revenues Results with adjuster at 8 mils May 1</b>	223 (2)	571 (1)	3,234 1	17.3%	390 (1)	649	60%	218 (20) 2
<b>Add an additional 1 mil to adjuster May 1 Change in quarterly surcharge revenues Results with adjuster at 9 mils May 1</b>	241 (2)	582 (1)	3,229 1	17.7%	401 (1)	649	62%	200 (20) 2
<b>Add an additional 1 mil to adjuster May 1 Change in quarterly surcharge revenues Results with adjuster at 10 mils May 1</b>	259 (2)	593 (1)	3,224 1	18.0%	412 (1)	649	63%	182 (20) 2
<b>Add an additional 1 mil to adjuster May 1 Change in quarterly surcharge revenues Results with adjuster at 10 mils May 1</b>	259 (2)	593 (1)	3,224 1	18.4%	423 (1)	649	65%	164 (20) 2

(1) assumes \$103m of 2006 revenues from 4 mil adjuster effective Feb. 1, \$11m of 2006 revenues from May 1 surcharge, \$24m of 2006 revenues from July 1 surcharge, and \$22m of 2006 revenues from quarterly surcharges (effective Sept. 1 and Dec. 1)

(2) FFO to debt was 16.6% with 11/30/05 prices and shorter Palo Verde outage

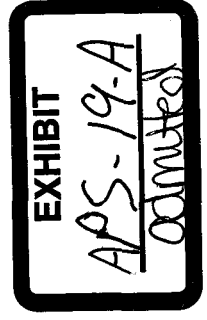


# Hatch-Miller Scenarios to Increase 2006 PSA Adjuster (Assumed to be Implemented May 1, 2006)

	2006 PSA Revenue	2006 FFO	2006 Avg. Total Debt	2006 FFO to Debt	2006 Net Cash Flow	2006 Capital Expenditures	2006 NCF as a % of Cap Exp	12/31/2006 Deferred Fuel (ACC Juris.)
Current rates incl. 2/06 4 mil adjuster, & APS May 1 and July 1 surcharges (2/28/06 prices & extended PV outage)	\$ 138 (1)	\$ 520	\$ 3,262	15.9% (2)	\$ 350	\$ 649	54%	\$ 285
Add an additional 1 mil to adjuster May 1	20	12	(6)		12			(20)
Results with adjuster at 5 mils May 1	158	532	3,256	16.3%	362	649	56%	265
Add an additional 1 mil to adjuster May 1	20	12	(6)		12			(20)
Results with adjuster at 6 mils May 1	178	544	3,250	16.7%	374	649	58%	245
Add an additional 1 mil to adjuster May 1	20	12	(6)		12			(20)
Results with adjuster at 7 mils May 1	198	556	3,244	17.1%	386	649	59%	225
Add an additional 1 mil to adjuster May 1	20	12	(6)		12			(20)
Results with adjuster at 8 mils May 1	218	568	3,238	17.5%	398	649	61%	205
Add an additional 1 mil to adjuster May 1	20	12	(6)		12			(20)
Results with adjuster at 9 mils May 1	238	580	3,232	17.9%	410	649	63%	185
Add an additional 1 mil to adjuster May 1	20	12	(6)		12			(20)
Results with adjuster at 10 mils May 1	258	592	3,226	18.4%	422	649	65%	165

(1) assumes \$103m of 2006 revenues from 4 mil adjuster effective Feb. 1, \$11m of 2006 revenues from May 1 surcharge, and \$24m of 2006 revenues from July 1 surcharge

(2) FFO to debt was 15.8% with 11/30/05 prices and shorter Palo Verde outage

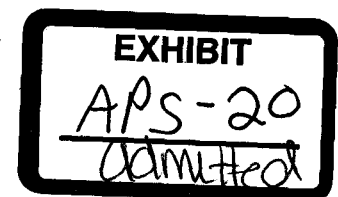


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**REBUTTAL TESTIMONY OF DAVID J. RUMOLO**  
**On Behalf of Arizona Public Service Company**  
**Docket No. E-01345A-06-0009**

**March 13, 2006**



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Statement of Qualifications ..... Appendix A

Analysis of Median and Average Usage on Rate Schedule E-12 ..... Attachment DJR-1

Analysis of Residential Customer Class ..... Attachment DJR-2

Analysis of General Service Customer Classes ..... Attachment DJR-3

1                                   **REBUTTAL TESTIMONY OF DAVID J. RUMOLO**  
2                                   **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**  
3                                   **(Docket No. E-01345A-06-0009)**

4    I.    INTRODUCTION

5    **Q.    PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

6    A.    My name is David J. Rumolo. My business address is 400 North Fifth Street,  
7           Phoenix, Arizona 85004.

8    **Q.    BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?**

9    A.    I am employed by Arizona Public Service Company ("APS" or "Company") as  
10           Manager of Regulation and Pricing. I am responsible for the establishment and  
11           administration of APS tariffs and contract provisions that are under the  
12           jurisdiction of the Arizona Corporation Commission ("Commission") or the  
13           Federal Energy Regulatory Commission ("FERC").

14   **Q.    WOULD YOU DISCUSS YOUR EDUCATIONAL BACKGROUND AND**  
15           **BUSINESS EXPERIENCE?**

16   A.    My background and experience are set forth in Appendix A to this testimony.

17   **Q.    WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

18   A.    My testimony focuses on one area, the impact of the requested  
19           interim/emergency rate filing on customers' bills in conjunction with other  
20           changes in rates that have occurred or may occur in 2006.

21   II.   SUMMARY

22   **Q.    PLEASE SUMMARIZE YOUR TESTIMONY.**

23   A.    My testimony comments on the bill impact analyses presented in the testimony  
24           of Staff Witness Barbara Keene. My testimony also provides analyses of  
25             
26

1 estimated bill impacts on average residential, general service and industrial  
2 customers. I explain the methodologies used to develop these estimates and  
3 provide bill impact information as requested by Commissioner Mayes in her  
4 letter of February 9, 2006.

5 **III. ANALYSIS**

6 **Q. DO YOU AGREE WITH THE RATE IMPACT ANALYSES PERFORMED**  
7 **BY STAFF WITNESS KEENE?**

8 A. Yes, Ms. Keene computed bill comparisons for median and average  
9 consumption levels based on Rate Schedule E-12. We performed the same  
10 analyses and our results are similar to those of Ms. Keene. Our analyses are  
11 presented in Attachment DJR-1. The only meaningful difference between Ms.  
12 Keene's results and our analyses is the treatment of the PSA reset. We have  
13 assumed that APS' permanent rate change will occur in January, 2007 and the  
14 PSA Adjustor Rate will be reset on February 1. Attachment DJR-1 also presents  
15 analyses of bill impacts for Rate Schedule E-12 customers that reflects the  
16 reduced emergency/interim request described in the testimony of APS Witness  
17 Steve Wheeler. For the average summer consumption level of 1,047 kWh, the  
18 revised request reduces the bill impact by \$2.60 per month. For average winter  
19 consumption of 677 kWh, the revised request reduces the bill impact by \$1.68.

20 **Q. PLEASE DESCRIBE THE APPROACH YOU USED TO ANALYZE BILL**  
21 **IMPACTS ON RESIDENTIAL CUSTOMERS.**

22 A. In previous rate comparisons that have been provided to the Commission,  
23 comparisons were developed based on mean and median consumption levels for  
24 customers served under Rate Schedule E-12. This is the approach that is  
25 demonstrated on Attachment DJR-1. Approximately 45% of APS residential  
26 customers are served under Rate Schedule E-12 and the rate is most commonly



1 applied to apartment dwellers throughout our service territory and single-family  
2 residences in the higher altitudes of our service territory. In the Phoenix metro  
3 area, detached single-family residences are commonly served under our time of  
4 use plan, Rate Schedule ET-1. My testimony discusses the impact on residential  
5 customer class as a whole.

6 **Q. PLEASE DESCRIBE YOUR ANALYSES.**

7 A. Attachment DJR-2 summarizes our analyses for the residential class and  
8 Attachment DJR-3 summarizes our general service class analyses. In our  
9 analyses, the comparison starting point is the July, 2003 tariff. From that  
10 starting point, we added the impacts of 1) the April 2005 rate increase (Decision  
11 No. 67744), 2) the \$0.004 per kWh adjuster that became effective in February,  
12 2006, 3) the proposed PSA Surcharge Step 1 (\$0.00055/kWh), 4) the revised  
13 requested emergency/interim increase (\$0.008676/kWh), 5) the requested PSA  
14 Surcharge Step 2 (\$0.001611/kWh) and 6) the permanent rate case request with  
15 the PSA Adjustor Rate reset. We have assumed the permanent rate change will  
16 become effective on January 1, 2007 and a PSA Adjuster Rate reset will occur  
17 on February 1, 2007. Under the assumption that the Commission will approve  
18 the interim/emergency rate increase, it is projected that the PSA Adjustor Rate  
19 will be reduced from 4 mills per kilowatthour to approximately 1.505 mills per  
20 kilowatthour as a result of the February, 2007 reset. The customer impact  
21 analyses are based on that assumption. Assumptions regarding timing are very  
22 important in the context of the data presented in the attachments to my  
23 testimony. For example, we have assumed that the PSA Surcharge Step 1 rate is  
24 still in effect when the permanent rates become effective. However, depending  
25 on the timing of approval of the surcharge compared to the effective date of a  
26

1 permanent rate increase, there may only be an overlap of a few months.  
2 Therefore, customers would only experience the cumulative impacts for a short  
3 period. My analyses indicate that the cumulative bill impact to the average  
4 residential customer due to all APS proposed rate changes (based on class  
5 average energy consumption for the rate case test year) during the summer  
6 season is approximately 32.6% and 24.6% for winter consumption compared to  
7 rates in effect prior to the Settlement Agreement approved in Decision No.  
8 67744.

9 **Q. PLEASE COMPARE YOUR RESIDENTIAL ANALYSIS WITH THAT OF**  
10 **MS. KEENE.**

11 A. As noted earlier, our residential analyses reflect all residential customers, not  
12 just customers served under Rate Schedule E-12. This impacts the energy basis  
13 used in the calculations. Our computations yielded an average residential winter  
14 season consumption level of 899 kWh per month while the average Rate  
15 Schedule E-12 winter consumption used in Ms. Keene's analysis was 677 kWh.  
16 For the summer residential calculations, our average consumption was 1,425  
17 kWh for all residential classes compared with the average Rate Schedule E-12  
18 consumption of 1,047 kWh. Recognizing these differences, our analyses and  
19 Ms. Keene's analyses provide comparable results. As noted earlier, we have  
20 included the effect of a PSA Adjustor Rate reset in February, 2007.

21 **Q. PLEASE DESCRIBE YOUR GENERAL SERVICE CUSTOMER CLASS**  
22 **ANALYSES.**

23 A. Defining a "typical" general service customer is very difficult since the class  
24 includes customers who purchase only a few kilowatthours each month to very  
25 large users. Also, there are numerous general service rate schedules including  
26 some that are applicable to only certain specific uses such as water pumping. For

1 the purposes of Attachment DJR-3, we computed commercial service bill  
2 impacts based on average consumption for customers serviced under Rate  
3 Schedule E-32. The impacts were computed separately for customers with loads  
4 over 20 kW and under 20 kW. Rate impacts for industrial customers were  
5 computed based on Rate Schedules E-34. The latter rate schedule is not  
6 seasonally differentiated.

7 **Q. YOUR ATTACHMENTS INDICATE A SLIGHT LOWERING OF BILLS**  
8 **CAN OCCUR WHEN THE FULL PERMANENT RATE INCREASE**  
9 **BECOMES EFFECTIVE COMPARED TO THE PREVIOUS RATE**  
10 **LEVEL. PLEASE EXPLAIN WHY THIS OCCURS.**

11 **A.** This occurs because of the replacement of the \$0.004 per kWh PSA Adjuster  
12 with the \$0.001505 per kWh PSA adjuster when the reset occurs on February 1,  
13 2007. Also, although the permanent rate increase has been described as a 21.3%  
14 increase (including the interim increase), actual bill impacts vary by rate  
15 schedule and consumption level.

16 **IV. CONCLUSION**

17 **Q. DOES THIS CONCLUDE YOUR PREFILED REBUTTAL TESTIMONY**  
18 **IN THIS PROCEEDING?**

19 **A.** Yes.  
20  
21  
22  
23  
24  
25  
26

**APPENDIX A**  
**Statement of Qualifications**  
**David J. Rumolo**

David J. Rumolo is Arizona Public Service Company's Manager of State Pricing. He has over 32 years experience in the electric utility business as a consultant and utility professional. Mr. Rumolo holds Bachelor of Science Degrees in Electrical Engineering and Business (Finance as an area of emphasis) from the University of Colorado. He is a registered professional engineer in the states of Arizona, California, and New Mexico.

Mr. Rumolo's areas of expertise include utility Rate Schedule design; embedded and marginal cost analysis; formulation of utility service policies; contract development and negotiation; utility valuation analyses; and evaluation of utility revenue requirements. Mr. Rumolo has testified on utility matters before state regulatory bodies in the states of Arizona, Colorado, Florida, and Wyoming and before judicial bodies in the states of Arizona and California. Mr. Rumolo is also experienced in the many aspects of electric utility planning and design including preparation of long range resource plans; transmission and distribution system long range planning; system protection analyses; and reliability assessments.

Mr. Rumolo has held his current position at Arizona Public Service Company for approximately five years. Prior to assuming that position, he served as the Manager of Transmission and Market Structure Assessment for Pinnacle West Energy Corporation ("PWEC"). Before joining PWEC, Mr. Rumolo had a 15-year career as a consultant with Resource Management International, Inc., where he provided utility Rate Schedule and engineering consulting services to utility clients across the United States and overseas. He began his career providing consulting services to utility clients when he joined the firm of Miner and Miner Consulting Engineers in Greeley, Colorado where he became the Manager of Planning and Rate Schedules. He later became a partner in Electrical Systems Consultants where he focused on cost of service and Rate Schedule analyses, as well as transmission and distribution planning.

**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Residential Rate Schedule E-12**  
**Mean and Median Consumption Levels**

	<u>As Filed Emergency/Interim Request</u>				<u>Revised Emergency/Interim Request</u>			
	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Average Usage)</b>								
Average Monthly Usage (kWh)	1,047				1,047			
7-03 rates	\$ 108.09				\$ 108.09			
4-05 rates	\$ 113.07	\$ 4.98	4.6%	4.6%	\$ 113.07	\$ 4.98	4.6%	4.6%
PSA adjuster (4 mills)	\$ 117.32	\$ 4.25	3.8%	8.5%	\$ 117.32	\$ 4.25	3.8%	8.5%
PSA surcharge - step 1	\$ 117.91	\$ 0.59	0.5%	9.1%	\$ 117.91	\$ 0.59	0.5%	9.1%
Emergency/Interim rate case	\$ 129.76	\$ 11.86	10.1%	20.1%	\$ 127.16	\$ 9.25	7.8%	17.6%
PSA surcharge - step 2	\$ 131.47	\$ 1.71	1.3%	21.6%	\$ 128.87	\$ 1.71	1.3%	19.2%
General Rate Case with reset PSA Adjustor Rate	\$ 137.31	\$ 5.84	4.4%	27.0%	\$ 137.31	\$ 8.44	6.6%	27.0%
	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Average Usage)</b>								
Average Monthly Usage (kWh)	677				677			
7-03 rates	\$ 57.91				\$ 57.91			
4-05 rates	\$ 59.09	\$ 1.18	2.0%	2.0%	\$ 59.09	\$ 1.18	2.0%	2.0%
PSA adjuster (4 mills)	\$ 61.84	\$ 2.75	4.7%	6.8%	\$ 61.84	\$ 2.75	4.7%	6.8%
PSA surcharge - step 1	\$ 62.22	\$ 0.39	0.6%	7.4%	\$ 62.22	\$ 0.39	0.6%	7.4%
Emergency/Interim rate case	\$ 69.89	\$ 7.67	12.3%	20.7%	\$ 68.21	\$ 5.98	9.6%	17.8%
PSA surcharge - step 2	\$ 71.00	\$ 1.11	1.6%	22.6%	\$ 69.32	\$ 1.11	1.6%	19.7%
General Rate Case with reset PSA Adjustor Rate	\$ 70.32	\$ (0.68)	-1.0%	21.4%	\$ 70.32	\$ 1.00	1.4%	21.4%
	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Median Usage)</b>								
Average Monthly Usage (kWh)	818				818			
7-03 rates	\$ 80.63				\$ 80.63			
4-05 rates	\$ 84.39	\$ 3.76	4.7%	4.7%	\$ 84.39	\$ 3.76	4.7%	4.7%
PSA adjuster (4 mills)	\$ 87.71	\$ 3.32	3.9%	8.8%	\$ 87.71	\$ 3.32	3.9%	8.8%
PSA surcharge - step 1	\$ 88.18	\$ 0.46	0.5%	9.4%	\$ 88.18	\$ 0.46	0.5%	9.4%
Emergency/Interim rate case	\$ 97.43	\$ 9.26	10.5%	20.8%	\$ 95.40	\$ 7.23	8.2%	18.3%
PSA surcharge - step 2	\$ 98.77	\$ 1.34	1.4%	22.5%	\$ 96.74	\$ 1.34	1.4%	20.0%
General Rate Case with reset PSA Adjustor Rate	\$ 101.64	\$ 2.86	2.9%	26.1%	\$ 101.64	\$ 4.90	5.1%	26.1%
	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Median Usage)</b>								
Average Monthly Usage (kWh)	531				531			
7-03 rates	\$ 47.11				\$ 47.11			
4-05 rates	\$ 48.14	\$ 1.03	2.2%	2.2%	\$ 48.14	\$ 1.03	2.2%	2.2%
PSA adjuster (4 mills)	\$ 50.29	\$ 2.15	4.5%	6.8%	\$ 50.29	\$ 2.15	4.5%	6.8%
PSA surcharge - step 1	\$ 50.59	\$ 0.29	0.6%	7.4%	\$ 50.59	\$ 0.29	0.6%	7.4%
Emergency/Interim rate case	\$ 56.60	\$ 6.02	11.9%	20.2%	\$ 55.29	\$ 4.70	9.3%	17.4%
PSA surcharge - step 2	\$ 57.47	\$ 0.87	1.5%	22.0%	\$ 56.15	\$ 0.87	1.6%	19.2%
General Rate Case with reset PSA Adjustor Rate	\$ 56.93	\$ (0.54)	-0.9%	20.8%	\$ 56.93	\$ 0.78	1.4%	20.8%

**Arizona Public Service  
Bill Impact Due to Rate Changes  
Residential**

	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>				
Average Monthly Usage (kWh)	1,425			
7-03 rates (w/o franchise fees)	\$ 127.10			
4-05 rates	\$ 132.80	\$ 5.70	4.5%	4.5%
PSA adjuster (4 mills)	\$ 138.49	\$ 5.70	4.3%	9.0%
PSA surcharge - step 1	\$ 139.28	\$ 0.79	0.6%	9.6%
Emergency/Interim rate case	\$ 151.64	\$ 12.36	8.9%	19.3%
PSA surcharge - step 2	\$ 153.94	\$ 2.30	1.5%	21.1%
General Rate Case with reset PSA Adjustor	\$ 168.58	\$ 14.64	9.5%	32.6%
<b>Winter</b>				
Average Monthly Usage (kWh)	899			
7-03 rates (w/o franchise fees)	\$ 70.91			
4-05 rates	\$ 71.96	\$ 1.05	1.5%	1.5%
PSA adjuster (4 mills)	\$ 75.55	\$ 2.56	4.6%	6.6%
PSA surcharge - step 1	\$ 76.05	\$ 0.35	0.6%	7.3%
Emergency/Interim rate case	\$ 83.85	\$ 7.14	12.3%	18.3%
PSA surcharge - step 2	\$ 85.30	\$ 1.03	1.6%	20.3%
General Rate Case with reset PSA Adjustor	\$ 88.36	\$ (0.64)	-1.0%	24.6%

**Arizona Public Service  
Bill Impact Due to Rate Changes  
General Service**

	E-32 above 20 kW				E-32 20 kW and Less				E-34			
	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>												
Average Monthly Usage (kWh)	37,988				1,397				2,683,630			
Average Monthly kW	109.7				10.1				5,133			
7-03 rates (w/o franchise fees)	\$ 3,227.90				\$ 162.53				\$ 138,793			
4-05 rates	\$ 3,277.58	\$ 49.68	1.5%	1.5%	\$ 157.13	\$ (5.39)	-3.3%	-3.3%	\$ 146,423	\$ 7,630	5.5%	5.5%
PSA adjuster (4 mills)	\$ 3,429.53	\$ 151.95	4.6%	6.2%	\$ 162.72	\$ 5.59	3.6%	0.1%	\$ 157,157	\$ 10,735	7.3%	13.2%
PSA surcharge - step 1	\$ 3,450.58	\$ 21.05	0.6%	6.9%	\$ 163.50	\$ 0.77	0.5%	0.6%	\$ 158,644	\$ 1,487	0.9%	14.3%
Emergency/Interim rate case	\$ 3,780.16	\$ 329.58	9.6%	17.1%	\$ 175.62	\$ 12.12	7.4%	8.1%	\$ 181,927	\$ 23,283	14.7%	31.1%
PSA surcharge - step 2	\$ 3,841.36	\$ 61.20	1.6%	19.0%	\$ 177.87	\$ 2.25	1.3%	9.4%	\$ 186,250	\$ 4,323	2.4%	34.2%
General Rate Case with reset PSA Adjustor	\$ 4,142.64	\$ 301.28	7.8%	28.3%	\$ 191.42	\$ 13.56	7.6%	17.8%	\$ 197,042	\$ 10,792	5.8%	42.0%
<b>Winter</b>												
Average Monthly Usage (kWh)	35,093				1,186				2,389,861			
Average Monthly kW	108.1				9.2				4,793			
7-03 rates (w/o franchise fees)	\$ 2,721.01				\$ 127.16				\$ 126,181			
4-05 rates	\$ 2,789.63	\$ 68.61	2.5%	2.5%	\$ 124.15	\$ (3.01)	-2.4%	-2.4%	\$ 132,995	\$ 6,814	5.4%	5.4%
PSA adjuster (4 mills)	\$ 2,930.00	\$ 140.37	5.0%	7.7%	\$ 128.89	\$ 4.74	3.8%	1.4%	\$ 142,554	\$ 9,559	7.2%	13.0%
PSA surcharge - step 1	\$ 2,949.44	\$ 19.44	0.7%	8.4%	\$ 129.55	\$ 0.66	0.5%	1.9%	\$ 143,878	\$ 1,324	0.9%	14.0%
Emergency/Interim rate case	\$ 3,253.91	\$ 304.47	10.3%	19.6%	\$ 139.84	\$ 10.29	7.9%	10.0%	\$ 164,612	\$ 20,734	14.4%	30.5%
PSA surcharge - step 2	\$ 3,310.44	\$ 56.53	1.7%	21.7%	\$ 141.75	\$ 1.91	1.4%	11.5%	\$ 168,463	\$ 3,850	2.3%	33.5%
General Rate Case with reset PSA Adjustor	\$ 3,403.87	\$ 93.43	2.8%	25.1%	\$ 146.88	\$ 5.13	3.6%	15.5%	\$ 178,311	\$ 9,848	5.8%	41.3%

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**Residential**

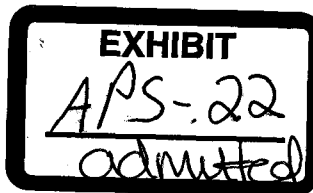
	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>				
Average Monthly Usage (kWh)	1,425			
7-03 rates (w/o franchise fees)	\$ 127.10			
4-05 rates	\$ 132.80	\$ 5.70	4.5%	4.5%
PSA adjuster (4 mills)	\$ 138.49	\$ 5.70	4.3%	9.0%
PSA surcharge - step 1	\$ 139.28	\$ 0.79	0.6%	9.6%
Emergency/Interim rate case	\$ 151.64	\$ 12.36	8.9%	19.3%
PSA surcharge - step 2	\$ 153.94	\$ 2.30	1.5%	21.1%
General Rate Case with reset PSA Adjustor	\$ 168.58	\$ 14.64	9.5%	32.6%
<b>Winter</b>				
Average Monthly Usage (kWh)	899			
7-03 rates (w/o franchise fees)	\$ 70.91			
4-05 rates	\$ 71.96	\$ 1.05	1.5%	1.5%
PSA adjuster (4 mills)	\$ 75.55	\$ 3.60	5.0%	6.6%
PSA surcharge - step 1	\$ 76.05	\$ 0.50	0.7%	7.3%
Emergency/Interim rate case	\$ 83.85	\$ 7.80	10.3%	18.3%
PSA surcharge - step 2	\$ 85.30	\$ 1.45	1.7%	20.3%
General Rate Case with reset PSA Adjustor	\$ 88.36	\$ 3.06	3.6%	24.6%

EXHIBIT

APS-21

admitted





**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Residential Rate Schedule E-12**  
**Mean and Median Consumption Levels**

As Filed Emergency/Interim Request

**Summer (Average Usage)**  
Average Monthly Usage (kWh)

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
7-03 rates	\$ 108.09			
4-05 rates	\$ 113.07	\$ 4.98	4.6%	4.6%
PSA adjuster (4 mills)	\$ 117.32	\$ 4.25	3.8%	8.5%
PSA surcharge - step 1	\$ 117.91	\$ 0.59	0.5%	9.1%
Emergency/Interim rate case	\$ 129.76	\$ 11.86	10.1%	20.1%
PSA surcharge - step 2	\$ 131.47	\$ 1.71	1.3%	21.6%
General Rate Case with reset PSA Adjustor Rate	\$ 137.31	\$ 5.84	4.4%	27.0%

Revised Emergency/Interim Request

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
7-03 rates	\$ 108.09			
4-05 rates	\$ 113.07	\$ 4.98	4.6%	4.6%
PSA adjuster (4 mills)	\$ 117.32	\$ 4.25	3.8%	8.5%
PSA surcharge - step 1	\$ 117.91	\$ 0.59	0.5%	9.1%
Emergency/Interim rate case	\$ 127.16	\$ 9.25	7.8%	17.6%
PSA surcharge - step 2	\$ 128.87	\$ 1.71	1.3%	19.2%
General Rate Case with reset PSA Adjustor Rate	\$ 137.31	\$ 8.44	6.6%	27.0%

**Winter (Average Usage)**  
Average Monthly Usage (kWh)

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
7-03 rates	\$ 57.91			
4-05 rates	\$ 59.09	\$ 1.18	2.0%	2.0%
PSA adjuster (4 mills)	\$ 61.84	\$ 2.75	4.7%	6.8%
PSA surcharge - step 1	\$ 62.22	\$ 0.39	0.6%	7.4%
Emergency/Interim rate case	\$ 69.89	\$ 7.67	12.3%	20.7%
PSA surcharge - step 2	\$ 71.00	\$ 1.11	1.6%	22.6%
General Rate Case with reset PSA Adjustor Rate	\$ 70.32	\$ (0.68)	-1.0%	21.4%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
7-03 rates	\$ 57.91			
4-05 rates	\$ 59.09	\$ 1.18	2.0%	2.0%
PSA adjuster (4 mills)	\$ 61.84	\$ 2.75	4.7%	6.8%
PSA surcharge - step 1	\$ 62.22	\$ 0.39	0.6%	7.4%
Emergency/Interim rate case	\$ 68.21	\$ 5.98	9.6%	17.8%
PSA surcharge - step 2	\$ 69.32	\$ 1.11	1.6%	19.7%
General Rate Case with reset PSA Adjustor Rate	\$ 70.32	\$ 1.00	1.4%	21.4%

**Summer (Median Usage)**  
Average Monthly Usage (kWh)

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
7-03 rates	\$ 80.63			
4-05 rates	\$ 84.39	\$ 3.76	4.7%	4.7%
PSA adjuster (4 mills)	\$ 87.71	\$ 3.32	3.9%	8.8%
PSA surcharge - step 1	\$ 88.18	\$ 0.46	0.5%	9.4%
Emergency/Interim rate case	\$ 97.43	\$ 9.26	10.5%	20.8%
PSA surcharge - step 2	\$ 98.77	\$ 1.34	1.4%	22.5%
General Rate Case with reset PSA Adjustor Rate	\$ 101.64	\$ 2.86	2.9%	26.1%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
7-03 rates	\$ 80.63			
4-05 rates	\$ 84.39	\$ 3.76	4.7%	4.7%
PSA adjuster (4 mills)	\$ 87.71	\$ 3.32	3.9%	8.8%
PSA surcharge - step 1	\$ 88.18	\$ 0.46	0.5%	9.4%
Emergency/Interim rate case	\$ 95.40	\$ 7.23	8.2%	18.3%
PSA surcharge - step 2	\$ 96.74	\$ 1.34	1.4%	20.0%
General Rate Case with reset PSA Adjustor Rate	\$ 101.64	\$ 4.90	5.1%	26.1%

**Winter (Median Usage)**  
Average Monthly Usage (kWh)

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
7-03 rates	\$ 47.11			
4-05 rates	\$ 48.14	\$ 1.03	2.2%	2.2%
PSA adjuster (4 mills)	\$ 50.29	\$ 2.15	4.5%	6.8%
PSA surcharge - step 1	\$ 50.59	\$ 0.29	0.6%	7.4%
Emergency/Interim rate case	\$ 56.60	\$ 6.02	11.9%	20.2%
PSA surcharge - step 2	\$ 57.47	\$ 0.87	1.5%	22.0%
General Rate Case with reset PSA Adjustor Rate	\$ 56.93	\$ (0.54)	-0.9%	20.8%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
7-03 rates	\$ 47.11			
4-05 rates	\$ 48.14	\$ 1.03	2.2%	2.2%
PSA adjuster (4 mills)	\$ 50.29	\$ 2.15	4.5%	6.8%
PSA surcharge - step 1	\$ 50.59	\$ 0.29	0.6%	7.4%
Emergency/Interim rate case	\$ 55.29	\$ 4.70	9.3%	17.4%
PSA surcharge - step 2	\$ 56.15	\$ 0.87	1.6%	19.2%
General Rate Case with reset PSA Adjustor Rate	\$ 56.93	\$ 0.78	1.4%	20.8%

**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Residential Rate Schedule E-12**  
**Mean and Median Consumption Levels**

Staff's Emer./Interim Proposal, 1 Yr Amort, ¢/kWh Chg.

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Average Usage)</b>				
Monthly Usage (kWh)	1,047			
7-03 rates	\$ 108.09			
4-05 rates	\$ 113.07	\$ 4.98	4.6%	4.6%
PSA adjuster (4 mills)	\$ 117.32	\$ 4.25	3.8%	8.5%
PSA surcharge - step 1	\$ 117.91	\$ 0.59	0.5%	9.1%
PSA surcharge - step 2	\$ 119.61	\$ 1.70	1.4%	10.7%
STAFF Q2 Surcharge	\$ 120.89	\$ 1.28	1.1%	11.8%
STAFF Q3 Surcharge	\$ 126.37	\$ 5.48	4.5%	16.9%
General Rate Case with reset PSA Adjustor Rate	\$ 143.26	\$ 16.89	13.4%	32.5%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Average Usage)</b>				
Monthly Usage (kWh)	677			
7-03 rates	\$ 57.91			
4-05 rates	\$ 59.09	\$ 1.18	2.0%	2.0%
PSA adjuster (4 mills)	\$ 61.84	\$ 2.75	4.7%	6.8%
PSA surcharge - step 1	\$ 62.22	\$ 0.39	0.6%	7.4%
PSA surcharge - step 2	\$ 63.32	\$ 1.10	1.8%	9.3%
STAFF Q2 Surcharge	\$ 64.15	\$ 0.83	1.3%	10.8%
STAFF Q3 Surcharge	\$ 67.69	\$ 3.54	5.5%	16.9%
General Rate Case with reset PSA Adjustor Rate	\$ 74.15	\$ 6.46	9.5%	28.0%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Median Usage)</b>				
Monthly Usage (kWh)	818			
7-03 rates	\$ 80.63			
4-05 rates	\$ 84.39	\$ 3.76	4.7%	4.7%
PSA adjuster (4 mills)	\$ 87.71	\$ 3.32	3.9%	8.8%
PSA surcharge - step 1	\$ 88.18	\$ 0.46	0.5%	9.4%
PSA surcharge - step 2	\$ 89.50	\$ 1.32	1.5%	11.0%
STAFF Q2 Surcharge	\$ 90.50	\$ 1.00	1.1%	12.2%
STAFF Q3 Surcharge	\$ 94.78	\$ 4.28	4.7%	17.5%
General Rate Case with reset PSA Adjustor Rate	\$ 106.28	\$ 11.50	12.1%	31.8%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Median Usage)</b>				
Monthly Usage (kWh)	531			
7-03 rates	\$ 47.11			
4-05 rates	\$ 48.14	\$ 1.03	2.2%	2.2%
PSA adjuster (4 mills)	\$ 50.29	\$ 2.15	4.5%	6.8%
PSA surcharge - step 1	\$ 50.59	\$ 0.29	0.6%	7.4%
PSA surcharge - step 2	\$ 51.46	\$ 0.87	1.7%	9.2%
STAFF Q2 Surcharge	\$ 52.11	\$ 0.65	1.3%	10.6%
STAFF Q3 Surcharge	\$ 54.89	\$ 2.78	5.3%	16.5%
General Rate Case with reset PSA Adjustor Rate	\$ 59.96	\$ 5.07	9.2%	27.3%

**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Residential Rate Schedule E-12**  
**Mean and Median Consumption Levels**

**Staff's Emer./Interim Proposal, 2 Yr Amort, ¢/kWh Chg.**

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Average Usage)</b>				
Monthly Usage (kWh)	1,047			
7-03 rates	\$ 108.09			
4-05 rates	\$ 113.07	\$ 4.98	4.6%	4.6%
PSA adjuster (4 mills)	\$ 117.32	\$ 4.25	3.8%	8.5%
PSA surcharge - step 1	\$ 117.91	\$ 0.59	0.5%	9.1%
PSA surcharge - step 2	\$ 119.61	\$ 1.70	1.4%	10.7%
STAFF Q2 Surcharge 2 Yr Amort	\$ 120.24	\$ 0.63	0.5%	11.2%
STAFF Q3 Surcharge 2 Yr Amort	\$ 122.92	\$ 2.68	2.2%	13.7%
General Rate Case with reset PSA Adjustor Rate	\$ 139.82	\$ 16.90	13.7%	29.4%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Average Usage)</b>				
Monthly Usage (kWh)	677			
7-03 rates	\$ 57.91			
4-05 rates	\$ 59.09	\$ 1.18	2.0%	2.0%
PSA adjuster (4 mills)	\$ 61.84	\$ 2.75	4.7%	6.8%
PSA surcharge - step 1	\$ 62.22	\$ 0.39	0.6%	7.4%
PSA surcharge - step 2	\$ 63.32	\$ 1.10	1.8%	9.3%
STAFF Q2 Surcharge 2 Yr Amort	\$ 63.73	\$ 0.41	0.6%	10.1%
STAFF Q3 Surcharge 2 Yr Amort	\$ 65.46	\$ 1.73	2.7%	13.0%
General Rate Case with reset PSA Adjustor Rate	\$ 71.93	\$ 6.47	9.9%	24.2%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Median Usage)</b>				
Monthly Usage (kWh)	818			
7-03 rates	\$ 80.63			
4-05 rates	\$ 84.39	\$ 3.76	4.7%	4.7%
PSA adjuster (4 mills)	\$ 87.71	\$ 3.32	3.9%	8.8%
PSA surcharge - step 1	\$ 88.18	\$ 0.46	0.5%	9.4%
PSA surcharge - step 2	\$ 89.50	\$ 1.32	1.5%	11.0%
STAFF Q2 Surcharge 2 Yr Amort	\$ 89.99	\$ 0.49	0.5%	11.6%
STAFF Q3 Surcharge 2 Yr Amort	\$ 92.09	\$ 2.10	2.3%	14.2%
General Rate Case with reset PSA Adjustor Rate	\$ 103.59	\$ 11.50	12.5%	28.5%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Median Usage)</b>				
Monthly Usage (kWh)	531			
7-03 rates	\$ 47.11			
4-05 rates	\$ 48.14	\$ 1.03	2.2%	2.2%
PSA adjuster (4 mills)	\$ 50.29	\$ 2.15	4.5%	6.8%
PSA surcharge - step 1	\$ 50.59	\$ 0.29	0.6%	7.4%
PSA surcharge - step 2	\$ 51.46	\$ 0.87	1.7%	9.2%
STAFF Q2 Surcharge 2 Yr Amort	\$ 51.78	\$ 0.32	0.6%	9.9%
STAFF Q3 Surcharge 2 Yr Amort	\$ 53.14	\$ 1.36	2.6%	12.8%
General Rate Case with reset PSA Adjustor Rate	\$ 58.21	\$ 5.07	9.5%	23.6%

**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Residential Rate Schedule E-12**  
**Mean and Median Consumption Levels**

**Staff's Emer./Interim Proposal, % Surc. 1 Yr Amort**

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Average Usage)</b>				
Monthly Usage (kWh)	1,047			
7-03 rates	\$ 108.09			
4-05 rates	\$ 113.07	\$ 4.98	4.6%	4.6%
PSA adjuster (4 mills)	\$ 117.32	\$ 4.25	3.8%	8.5%
PSA surcharge - step 1	\$ 117.91	\$ 0.59	0.5%	9.1%
PSA surcharge - step 2	\$ 119.61	\$ 1.70	1.4%	10.7%
STAFF Q2 Surcharge as %, 1 Yr Amort	\$ 121.30	\$ 1.69	1.4%	12.2%
STAFF Q3 Surcharge as %, 1 Yr Amort	\$ 128.49	\$ 7.19	5.9%	18.9%
General Rate Case with reset PSA Adjustor Rate	\$ 145.38	\$ 16.89	13.1%	34.5%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Average Usage)</b>				
Monthly Usage (kWh)	677			
7-03 rates	\$ 57.91			
4-05 rates	\$ 59.09	\$ 1.18	2.0%	2.0%
PSA adjuster (4 mills)	\$ 61.84	\$ 2.75	4.7%	6.8%
PSA surcharge - step 1	\$ 62.22	\$ 0.39	0.6%	7.4%
PSA surcharge - step 2	\$ 63.32	\$ 1.10	1.8%	9.3%
STAFF Q2 Surcharge as %, 1 Yr Amort	\$ 64.20	\$ 0.88	1.4%	10.9%
STAFF Q3 Surcharge as %, 1 Yr Amort	\$ 67.94	\$ 3.74	5.8%	17.3%
General Rate Case with reset PSA Adjustor Rate	\$ 74.41	\$ 6.47	9.5%	28.5%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Median Usage)</b>				
Monthly Usage (kWh)	818			
7-03 rates	\$ 80.63			
4-05 rates	\$ 84.39	\$ 3.76	4.7%	4.7%
PSA adjuster (4 mills)	\$ 87.71	\$ 3.32	3.9%	8.8%
PSA surcharge - step 1	\$ 88.18	\$ 0.46	0.5%	9.4%
PSA surcharge - step 2	\$ 89.50	\$ 1.32	1.5%	11.0%
STAFF Q2 Surcharge as %, 1 Yr Amort	\$ 90.76	\$ 1.26	1.4%	12.6%
STAFF Q3 Surcharge as %, 1 Yr Amort	\$ 96.12	\$ 5.36	5.9%	19.2%
General Rate Case with reset PSA Adjustor Rate	\$ 107.62	\$ 11.50	12.0%	33.5%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Median Usage)</b>				
Monthly Usage (kWh)	531			
7-03 rates	\$ 47.11			
4-05 rates	\$ 48.14	\$ 1.03	2.2%	2.2%
PSA adjuster (4 mills)	\$ 50.29	\$ 2.15	4.5%	6.8%
PSA surcharge - step 1	\$ 50.59	\$ 0.29	0.6%	7.4%
PSA surcharge - step 2	\$ 51.46	\$ 0.87	1.7%	9.2%
STAFF Q2 Surcharge as %, 1 Yr Amort	\$ 52.18	\$ 0.72	1.4%	10.8%
STAFF Q3 Surcharge as %, 1 Yr Amort	\$ 55.23	\$ 3.05	5.8%	17.2%
General Rate Case with reset PSA Adjustor Rate	\$ 60.29	\$ 5.06	9.2%	28.0%

**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Residential Rate Schedule E-12**  
**Mean and Median Consumption Levels**

**Staff's Emer./Interim Proposal, % Surc. 2 Yr. Amort**

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Average Usage)</b>				
Monthly Usage (kWh)	1,047			
7-03 rates	\$ 108.09			
4-05 rates	\$ 113.07	\$ 4.98	4.6%	4.6%
PSA adjuster (4 mills)	\$ 117.32	\$ 4.25	3.8%	8.5%
PSA surcharge - step 1	\$ 117.91	\$ 0.59	0.5%	9.1%
PSA surcharge - step 2	\$ 119.61	\$ 1.70	1.4%	10.7%
STAFF Q2 Surcharge as %, 2 Yr Amort	\$ 120.40	\$ 0.79	0.7%	11.4%
STAFF Q3 Surcharge as %, 2 Yr Amort	\$ 123.99	\$ 3.59	3.0%	14.7%
General Rate Case with reset PSA Adjustor Rate	\$ 140.89	\$ 16.90	13.6%	30.3%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Average Usage)</b>				
Monthly Usage (kWh)	677			
7-03 rates	\$ 57.91			
4-05 rates	\$ 59.09	\$ 1.18	2.0%	2.0%
PSA adjuster (4 mills)	\$ 61.84	\$ 2.75	4.7%	6.8%
PSA surcharge - step 1	\$ 62.22	\$ 0.39	0.6%	7.4%
PSA surcharge - step 2	\$ 63.32	\$ 1.10	1.8%	9.3%
STAFF Q2 Surcharge as %, 2 Yr Amort	\$ 63.73	\$ 0.41	0.6%	10.1%
STAFF Q3 Surcharge as %, 2 Yr Amort	\$ 65.60	\$ 1.87	2.9%	13.3%
General Rate Case with reset PSA Adjustor Rate	\$ 72.07	\$ 6.47	9.9%	24.5%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Median Usage)</b>				
Monthly Usage (kWh)	818			
7-03 rates	\$ 80.63			
4-05 rates	\$ 84.39	\$ 3.76	4.7%	4.7%
PSA adjuster (4 mills)	\$ 87.71	\$ 3.32	3.9%	8.8%
PSA surcharge - step 1	\$ 88.18	\$ 0.46	0.5%	9.4%
PSA surcharge - step 2	\$ 89.50	\$ 1.32	1.5%	11.0%
STAFF Q2 Surcharge as %, 2 Yr Amort	\$ 90.09	\$ 0.59	0.7%	11.7%
STAFF Q3 Surcharge as %, 2 Yr Amort	\$ 92.77	\$ 2.68	3.0%	15.1%
General Rate Case with reset PSA Adjustor Rate	\$ 104.27	\$ 11.50	12.4%	29.3%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Median Usage)</b>				
Monthly Usage (kWh)	531			
7-03 rates	\$ 47.11			
4-05 rates	\$ 48.14	\$ 1.03	2.2%	2.2%
PSA adjuster (4 mills)	\$ 50.29	\$ 2.15	4.5%	6.8%
PSA surcharge - step 1	\$ 50.59	\$ 0.29	0.6%	7.4%
PSA surcharge - step 2	\$ 51.46	\$ 0.87	1.7%	9.2%
STAFF Q2 Surcharge as %, 2 Yr Amort	\$ 51.80	\$ 0.34	0.7%	10.0%
STAFF Q3 Surcharge as %, 2 Yr Amort	\$ 53.32	\$ 1.52	2.9%	13.2%
General Rate Case with reset PSA Adjustor Rate	\$ 58.39	\$ 5.07	9.5%	23.9%

**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Residential Rate Schedule E-12**  
**Mean and Median Consumption Levels**

**AECC Emergency/Interim Proposal 5.3%**

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Average Usage)</b>				
Monthly Usage (kWh)	1,047			
7-03 rates	\$ 108.09			
4-05 rates	\$ 113.07	\$ 4.98	4.6%	4.6%
PSA adjuster (4 mills)	\$ 117.32	\$ 4.25	3.8%	8.5%
PSA surcharge - step 1	\$ 117.91	\$ 0.59	0.5%	9.1%
AECC Interim Inc.	\$ 123.86	\$ 5.95	5.0%	14.6%
General Rate Case with reset PSA Adjustor Rate	\$ 138.25	\$ 14.39	11.6%	27.9%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Average Usage)</b>				
Monthly Usage (kWh)	677			
7-03 rates	\$ 57.91			
4-05 rates	\$ 59.09	\$ 1.18	2.0%	2.0%
PSA adjuster (4 mills)	\$ 61.84	\$ 2.75	4.7%	6.8%
PSA surcharge - step 1	\$ 62.22	\$ 0.39	0.6%	7.4%
AECC Interim Inc.	\$ 65.32	\$ 3.10	5.0%	12.8%
General Rate Case with reset PSA Adjustor Rate	\$ 70.91	\$ 5.59	8.6%	22.4%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Summer (Median Usage)</b>				
Monthly Usage (kWh)	818			
7-03 rates	\$ 80.63			
4-05 rates	\$ 84.39	\$ 3.76	4.7%	4.7%
PSA adjuster (4 mills)	\$ 87.71	\$ 3.32	3.9%	8.8%
PSA surcharge - step 1	\$ 88.18	\$ 0.46	0.5%	9.4%
AECC Interim Inc.	\$ 92.61	\$ 4.43	5.0%	14.9%
General Rate Case with reset PSA Adjustor Rate	\$ 102.36	\$ 9.75	10.5%	27.0%

	Typical Bill E12	increase E12	% increase E12	Cumulative increase over 7-03 rates E12
<b>Winter (Median Usage)</b>				
Monthly Usage (kWh)	531			
7-03 rates	\$ 47.11			
4-05 rates	\$ 48.14	\$ 1.03	2.2%	2.2%
PSA adjuster (4 mills)	\$ 50.29	\$ 2.15	4.5%	6.8%
PSA surcharge - step 1	\$ 50.59	\$ 0.29	0.6%	7.4%
AECC Interim Inc.	\$ 53.12	\$ 2.53	5.0%	12.8%
General Rate Case with reset PSA Adjustor Rate	\$ 57.41	\$ 4.29	8.1%	21.9%

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**Residential**  
**Revised Emergency/Interim Request**

	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>				
Average Monthly Usage (kWh)	1,425			
7-03 rates	\$ 127.10			
4-05 rates	\$ 132.80	\$ 5.70	4.5%	4.5%
PSA adjustor (4 Mills)	\$ 138.49	\$ 5.70	4.3%	9.0%
PSA Surcharge Step 1	\$ 139.28	\$ 0.79	0.6%	9.6%
Emergency/Interim rate case	\$ 151.64	\$ 12.36	8.9%	19.3%
PSA surcharge - step 2	\$ 153.94	\$ 2.30	1.5%	21.1%
General Rate Case with reset PSA Adjustor	\$ 168.58	\$ 14.64	9.5%	32.6%
<b>Winter</b>				
Average Monthly Usage (kWh)	899			
7-03 rates	\$ 70.91			
4-05 rates	\$ 71.96	\$ 1.05	1.5%	1.5%
PSA adjustor (4 Mills)	\$ 75.55	\$ 3.60	5.0%	6.6%
PSA Surcharge Step 1	\$ 76.05	\$ 0.50	0.7%	7.3%
Emergency/Interim rate case	\$ 83.85	\$ 7.80	10.3%	18.3%
PSA surcharge - step 2	\$ 85.30	\$ 1.45	1.7%	20.3%
General Rate Case with reset PSA Adjustor	\$ 88.36	\$ 3.06	3.6%	24.6%

note: Franchise fees excluded from analysis.

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**Residential**

**Staff's Emergency/Interim Proposal, 1Yr Amort, ¢/kWh Chg.**

	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>				
Average Monthly Usage (kWh)	1,425			
7-03 rates	\$ 127.10			
4-05 rates	\$ 132.80	\$ 5.70	4.5%	4.5%
PSA adjustor (4 Mills)	\$ 138.49	\$ 5.70	4.3%	9.0%
PSA Surcharge Step 1	\$ 139.28	\$ 0.79	0.6%	9.6%
PSA Surcharge Step 2	\$ 141.58	\$ 2.30	1.6%	11.4%
Staff Q2 surcharge, 1 Yr Amort	\$ 143.29	\$ 1.71	1.2%	12.7%
Staff Q3 surcharge, 1 Yr Amort	\$ 150.64	\$ 7.35	5.1%	18.5%
General Rate Case with reset PSA Adjustor Rate	\$ 176.56	\$ 25.92	17.2%	38.9%
<b>Winter</b>				
Average Monthly Usage (kWh)	899			
7-03 rates	\$ 70.91			
4-05 rates	\$ 71.96	\$ 1.05	1.5%	1.5%
PSA adjustor (4 Mills)	\$ 75.55	\$ 3.60	5.0%	6.6%
PSA Surcharge Step 1	\$ 76.05	\$ 0.50	0.7%	7.3%
PSA Surcharge Step 2	\$ 77.50	\$ 1.45	1.9%	9.3%
Staff Q2 surcharge, 1 Yr Amort	\$ 78.58	\$ 1.08	1.4%	10.8%
Staff Q3 surcharge, 1 Yr Amort	\$ 83.22	\$ 4.64	5.9%	17.4%
General Rate Case with reset PSA Adjustor Rate	\$ 93.40	\$ 10.18	12.2%	31.7%

note: Franchise fees excluded from analysis.



**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**Residential**  
**Staff's Emergency/Interim Proposal, 2 Yr Amort, ¢/kWh Chg.**

	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>				
Average Monthly Usage (kWh)	1,425			
7-03 rates	\$ 127.10			
4-05 rates	\$ 132.80	\$ 5.70	4.5%	4.5%
PSA adjustor (4 Mills)	\$ 138.49	\$ 5.70	4.3%	9.0%
PSA Surcharge Step 1	\$ 139.28	\$ 0.79	0.6%	9.6%
PSA Surcharge Step 2	\$ 141.58	\$ 2.30	1.6%	11.4%
Staff Q2 surcharge, 2 Yr Amort	\$ 142.42	\$ 0.84	0.6%	12.1%
Staff Q3 surcharge, 2 Yr Amort	\$ 142.78	\$ 0.36	0.3%	12.3%
General Rate Case with reset PSA Adjustor Rate	\$ 168.70	\$ 25.92	18.2%	32.7%
<b>Winter</b>				
Average Monthly Usage (kWh)	899			
7-03 rates	\$ 70.91			
4-05 rates	\$ 71.96	\$ 1.05	1.5%	1.5%
PSA adjustor (4 Mills)	\$ 75.55	\$ 3.60	5.0%	6.6%
PSA Surcharge Step 1	\$ 76.05	\$ 0.50	0.7%	7.3%
PSA Surcharge Step 2	\$ 77.50	\$ 1.45	1.9%	9.3%
Staff Q2 surcharge, 2 Yr Amort	\$ 78.03	\$ 0.53	0.7%	10.0%
Staff Q3 surcharge, 2 Yr Amort	\$ 78.26	\$ 0.23	0.3%	10.4%
General Rate Case with reset PSA Adjustor Rate	\$ 88.44	\$ 10.18	13.0%	24.7%

note: Franchise fees excluded from analysis.

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**Residential**  
**Staff's Emergency/Interim Proposal, %Surcharge, 1Yr Amort**

	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>				
Average Monthly Usage (kWh)	1,425			
7-03 rates	\$ 127.10			
4-05 rates	\$ 132.80	\$ 5.70	4.5%	4.5%
PSA adjustor (4 Mills)	\$ 138.49	\$ 5.70	4.3%	9.0%
PSA Surcharge Step 1	\$ 139.28	\$ 0.79	0.6%	9.6%
PSA Surcharge Step 2	\$ 141.58	\$ 2.30	1.6%	11.4%
Staff Q2 surcharge as %, 1 Yr Amort	\$ 143.57	\$ 1.99	1.4%	13.0%
Staff Q3 surcharge as %, 1 Yr Amort	\$ 152.07	\$ 8.50	5.9%	19.6%
General Rate Case with reset PSA Adjustor Rate	\$ 177.99	\$ 25.92	17.0%	40.0%
<b>Winter</b>				
Average Monthly Usage (kWh)	899			
7-03 rates	\$ 70.91			
4-05 rates	\$ 71.96	\$ 1.05	1.5%	1.5%
PSA adjustor (4 Mills)	\$ 75.55	\$ 3.60	5.0%	6.6%
PSA Surcharge Step 1	\$ 76.05	\$ 0.50	0.7%	7.3%
PSA Surcharge Step 2	\$ 77.50	\$ 1.45	1.9%	9.3%
Staff Q2 surcharge as %, 1 Yr Amort	\$ 78.58	\$ 1.08	1.4%	10.8%
Staff Q3 surcharge as %, 1 Yr Amort	\$ 83.18	\$ 4.61	5.9%	17.3%
General Rate Case with reset PSA Adjustor Rate	\$ 93.37	\$ 10.18	12.2%	31.7%

note: Franchise fees excluded from analysis.

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**Residential**  
**Staff's Emergency/Interim Proposal, %Surchage, 2 Yr Amort**

	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>				
Average Monthly Usage (kWh)	1,425			
7-03 rates	\$ 127.10			
4-05 rates	\$ 132.80	\$ 5.70	4.5%	4.5%
PSA adjustor (4 Mills)	\$ 138.49	\$ 5.70	4.3%	9.0%
PSA Surchage Step 1	\$ 139.28	\$ 0.79	0.6%	9.6%
PSA Surchage Step 2	\$ 141.58	\$ 2.30	1.6%	11.4%
Staff Q2 surcharge as %, 2 Yr Amort	\$ 142.51	\$ 0.93	0.7%	12.1%
Staff Q3 surcharge as %, 2 Yr Amort	\$ 146.76	\$ 4.25	3.0%	15.5%
General Rate Case with reset PSA Adjustor Rate	\$ 172.68	\$ 25.92	17.7%	35.9%
<b>Winter</b>				
Average Monthly Usage (kWh)	899			
7-03 rates	\$ 70.91			
4-05 rates	\$ 71.96	\$ 1.05	1.5%	1.5%
PSA adjustor (4 Mills)	\$ 75.55	\$ 3.60	5.0%	6.6%
PSA Surchage Step 1	\$ 76.05	\$ 0.50	0.7%	7.3%
PSA Surchage Step 2	\$ 77.50	\$ 1.45	1.9%	9.3%
Staff Q2 surcharge as %, 2 Yr Amort	\$ 78.00	\$ 0.50	0.6%	10.0%
Staff Q3 surcharge as %, 2 Yr Amort	\$ 80.31	\$ 2.30	3.0%	13.3%
General Rate Case with reset PSA Adjustor Rate	\$ 90.49	\$ 10.18	12.7%	27.6%

note: Franchise fees excluded from analysis.

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**Residential**

**AECC Emergency/Interim Proposal with 5.3% interim charge**

	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>				
Average Monthly Usage (kWh)	1,425			
7-03 rates	\$ 127.10			
4-05 rates	\$ 132.80	\$ 5.70	4.5%	4.5%
PSA adjustor (4 Mills)	\$ 138.49	\$ 5.70	4.3%	9.0%
PSA Surcharge - step 1	\$ 139.28	\$ 0.79	0.6%	9.6%
AECC interim Inc.	\$ 146.32	\$ 7.04	5.1%	15.1%
General Rate Case with reset PSA Adjustor Rate	\$ 169.84	\$ 23.51	16.1%	33.6%
<b>Winter</b>				
Average Monthly Usage (kWh)	899			
7-03 rates	\$ 70.91			
4-05 rates	\$ 71.96	\$ 1.05	1.5%	1.5%
PSA adjustor (4 Mills)	\$ 75.55	\$ 3.60	5.0%	6.6%
PSA Surcharge - step 1	\$ 76.05	\$ 0.50	0.7%	7.3%
AECC interim Inc.	\$ 79.87	\$ 3.81	5.0%	12.6%
General Rate Case with reset PSA Adjustor Rate	\$ 89.16	\$ 9.29	11.6%	25.7%

note: Franchise fees excluded from analysis.

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**General Service**  
**Revised Emergency/Interim Request**

	E-32 above 20 kW			E-32 20 kW and Less			E-34		
	Typical Bill	increase	% increase	Typical Bill	increase	% increase	Typical Bill	increase	% increase
<b>Summer</b>									
Average Monthly Usage (kWh)	37,988			1,397			2,683,630		
Average Monthly kW	109.7			10.1			5,133		
7-03 rates	\$ 3,227.90			\$ 162.53			\$ 138,793		
4-05 rates	\$ 3,277.58	\$ 49.68	1.5%	\$ 157.13	\$ (5.39)	-3.3%	\$ 146,423	\$ 7,630	5.5%
PSA adjustor (4 Mills)	\$ 3,429.53	\$ 151.95	4.6%	\$ 162.72	\$ 5.59	3.6%	\$ 157,157	\$ 10,735	7.3%
PSA Surcharge Step 1	\$ 3,450.58	\$ 21.05	0.6%	\$ 163.50	\$ 0.77	0.5%	\$ 158,644	\$ 1,487	0.9%
Emergency/Interim rate case	\$ 3,780.16	\$ 329.58	9.6%	\$ 175.62	\$ 12.12	7.4%	\$ 181,927	\$ 23,283	14.7%
PSA surcharge - step 2	\$ 3,841.36	\$ 61.20	1.6%	\$ 177.87	\$ 2.25	1.3%	\$ 186,250	\$ 4,323	2.4%
General Rate Case with reset PSA Adjustor	\$ 4,142.64	\$ 301.28	7.8%	\$ 191.42	\$ 13.56	7.6%	\$ 197,042	\$ 10,792	5.8%
									42.0%
<b>Winter</b>									
Average Monthly Usage (kWh)	35,093			1,186			2,389,861		
Average Monthly kW	108.1			9.2			4,793		
7-03 rates	\$ 2,721.01			\$ 127.16			\$ 126,181		
4-05 rates	\$ 2,789.63	\$ 68.61	2.5%	\$ 124.15	\$ (3.01)	-2.4%	\$ 132,995	\$ 6,814	5.4%
PSA adjustor (4 Mills)	\$ 2,930.00	\$ 140.37	5.0%	\$ 128.89	\$ 4.74	3.8%	\$ 142,554	\$ 9,559	7.2%
PSA Surcharge Step 1	\$ 2,949.44	\$ 19.44	0.7%	\$ 129.55	\$ 0.66	0.5%	\$ 143,878	\$ 1,324	0.9%
Emergency/Interim rate case	\$ 3,253.91	\$ 304.47	10.3%	\$ 139.84	\$ 10.29	7.9%	\$ 164,612	\$ 20,734	14.4%
PSA surcharge - step 2	\$ 3,310.44	\$ 56.53	1.7%	\$ 141.75	\$ 1.91	1.4%	\$ 168,463	\$ 3,850	2.3%
General Rate Case with reset PSA Adjustor	\$ 3,403.87	\$ 93.43	2.8%	\$ 146.88	\$ 5.13	3.6%	\$ 178,311	\$ 9,848	5.8%
									41.3%

note: Franchise fees excluded from analysis.

**Bill Impact Due to Rate Changes**  
**General Service**  
**Staff's Emergency/Interim Proposal, 1Yr Amort, ¢/kWh Chg.**

	E-32 above 20 kW			E-32 20 kW and Less			E-34		
	Typical Bill	increase	% increase	Typical Bill	increase	% increase	Typical Bill	increase	% increase
<b>Summer</b>									
Average Monthly Usage (kWh)	37,988			1,397			2,683,630		
Average Monthly kW	108.7			10.1			5,133		
7-03 rates	\$ 3,227.90			\$ 162.53			\$ 138,793		
4-05 rates	\$ 3,277.58	\$ 49.68	1.5%	\$ 157.13	\$ (5.39)	-3.3%	\$ 146,423	\$ 7,630	5.5%
PSA adjustor (4 Mills)	\$ 3,429.53	\$ 151.95	4.6%	\$ 162.72	\$ 5.59	3.6%	\$ 157,157	\$ 10,735	7.3%
PSA Surcharge Step 1	\$ 3,450.58	\$ 21.05	0.6%	\$ 163.50	\$ 0.77	0.5%	\$ 158,644	\$ 1,487	0.9%
PSA Surcharge Step 2	\$ 3,511.78	\$ 61.20	1.8%	\$ 165.75	\$ 2.25	1.4%	\$ 162,967	\$ 4,323	2.7%
Staff Q2 surcharge, 1 Yr Amort	\$ 3,557.40	\$ 45.62	1.3%	\$ 167.42	\$ 1.68	1.0%	\$ 166,190	\$ 3,223	2.0%
Staff Q3 surcharge, 1 Yr Amort	\$ 3,753.38	\$ 195.98	5.5%	\$ 174.63	\$ 7.21	4.3%	\$ 180,035	\$ 13,845	8.3%
General Rate Case with reset PSA Adjustor Rate	\$ 4,355.49	\$ 602.11	16.0%	\$ 199.25	\$ 24.62	14.1%	\$ 212,079	\$ 32,044	17.8%
<b>Winter</b>									
Average Monthly Usage (kWh)	35,093			1,186			2,389,861		
Average Monthly kW	108.1			9.2			4,793		
7-03 rates	\$ 2,721.01			\$ 127.16			\$ 126,181		
4-05 rates	\$ 2,789.63	\$ 68.61	2.5%	\$ 124.15	\$ (3.01)	-2.4%	\$ 132,995	\$ 6,814	5.4%
PSA adjustor (4 Mills)	\$ 2,930.00	\$ 140.37	5.0%	\$ 128.89	\$ 4.74	3.8%	\$ 142,554	\$ 9,559	7.2%
PSA Surcharge Step 1	\$ 2,949.44	\$ 19.44	0.7%	\$ 129.55	\$ 0.66	0.5%	\$ 143,878	\$ 1,324	0.9%
PSA Surcharge Step 2	\$ 3,005.98	\$ 56.53	1.9%	\$ 131.46	\$ 1.91	1.5%	\$ 147,728	\$ 3,850	2.7%
Staff Q2 surcharge, 1 Yr Amort	\$ 3,048.12	\$ 42.15	1.4%	\$ 132.88	\$ 1.42	1.1%	\$ 150,598	\$ 2,870	1.9%
Staff Q3 surcharge, 1 Yr Amort	\$ 3,229.17	\$ 181.04	5.9%	\$ 139.00	\$ 6.12	4.6%	\$ 162,928	\$ 12,329	8.2%
General Rate Case with reset PSA Adjustor Rate	\$ 3,600.49	\$ 371.33	11.5%	\$ 153.53	\$ 14.52	10.4%	\$ 191,701	\$ 28,773	17.7%

note: Franchise fees excluded from analysis.

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**General Service**  
**Staff's Emergency/Interim Proposal, 2 Yr Amort, ¢/kWh Chg.**

	E-32 above 20 kW				E-32 20 kW and Less				E-34			
	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>												
Average Monthly Usage (kWh)	37,988				1,397				2,683,630			
Average Monthly kW	109.7				10.1				5,133			
7-03 rates	\$ 3,227.90				\$ 162.53				\$ 138,793			
4-05 rates	\$ 3,277.58	\$ 49.68	1.5%	1.5%	\$ 157.13	\$ (5.39)	-3.3%	-3.3%	\$ 146,423	\$ 7,630	5.5%	5.5%
PSA adjustor (4 Mills)	\$ 3,429.53	\$ 151.95	4.6%	6.2%	\$ 162.72	\$ 5.59	3.6%	0.1%	\$ 157,157	\$ 10,735	7.3%	13.2%
PSA Surcharge Step 1	\$ 3,450.58	\$ 21.05	0.6%	6.9%	\$ 163.50	\$ 0.77	0.5%	0.6%	\$ 158,644	\$ 1,487	0.9%	14.3%
PSA Surcharge Step 2	\$ 3,511.78	\$ 61.20	1.8%	8.8%	\$ 165.75	\$ 2.25	1.4%	2.0%	\$ 162,967	\$ 4,323	2.7%	17.4%
Staff Q2 surcharge, 2 Yr Amort	\$ 3,534.15	\$ 22.37	0.6%	9.5%	\$ 166.57	\$ 0.82	0.5%	2.5%	\$ 164,548	\$ 1,581	1.0%	18.6%
Staff Q3 surcharge, 2 Yr Amort	\$ 3,543.75	\$ 9.60	0.3%	9.8%	\$ 166.92	\$ 0.35	0.2%	2.7%	\$ 165,226	\$ 678	0.4%	19.0%
General Rate Case with reset PSA Adjustor Rate	\$ 4,145.86	\$ 602.11	17.0%	28.4%	\$ 191.54	\$ 24.62	14.7%	17.9%	\$ 197,270	\$ 32,044	19.4%	42.1%
<b>Winter</b>												
Average Monthly Usage (kWh)	35,093				1,186				2,389,861			
Average Monthly kW	108.1				9.2				4,793			
7-03 rates	\$ 2,721.01				\$ 127.16				\$ 126,181			
4-05 rates	\$ 2,789.63	\$ 68.61	2.5%	2.5%	\$ 124.15	\$ (3.01)	-2.4%	-2.4%	\$ 132,995	\$ 6,814	5.4%	5.4%
PSA adjustor (4 Mills)	\$ 2,930.00	\$ 140.37	5.0%	7.7%	\$ 128.89	\$ 4.74	3.8%	1.4%	\$ 142,554	\$ 9,559	7.2%	13.0%
PSA Surcharge Step 1	\$ 2,949.44	\$ 19.44	0.7%	8.4%	\$ 129.55	\$ 0.66	0.5%	1.9%	\$ 143,878	\$ 1,324	0.9%	14.0%
PSA Surcharge Step 2	\$ 3,005.98	\$ 56.53	1.9%	10.5%	\$ 131.46	\$ 1.91	1.5%	3.4%	\$ 147,728	\$ 3,850	2.7%	17.1%
Staff Q2 surcharge, 2 Yr Amort	\$ 3,026.65	\$ 20.67	0.7%	11.2%	\$ 132.16	\$ 0.70	0.5%	3.9%	\$ 149,136	\$ 1,408	1.0%	18.2%
Staff Q3 surcharge, 2 Yr Amort	\$ 3,035.51	\$ 8.87	0.3%	11.6%	\$ 132.46	\$ 0.30	0.2%	4.2%	\$ 149,740	\$ 604	0.4%	18.7%
General Rate Case with reset PSA Adjustor Rate	\$ 3,406.94	\$ 371.33	12.2%	25.2%	\$ 146.98	\$ 14.52	11.0%	15.6%	\$ 178,513	\$ 28,773	19.2%	41.5%

note: Franchise fees excluded from analysis.

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**General Service**  
**Staff's Emergency/Interim Proposal, %Surcharge, 1Yr Amort**

	E-32 above 20 kW				E-32 20 kW and Less				E-34			
	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>												
Average Monthly Usage (kWh)	37,988				1,397				2,683,630			
Average Monthly kW	109.7				10.1				5,133			
7-03 rates	\$ 3,227.90				\$ 162.53				\$ 138,793			
4-05 rates	\$ 3,277.58	\$ 49.68	1.5%	1.5%	\$ 157.13	\$ (5.39)	-3.3%	-3.3%	\$ 146,423	\$ 7,630	5.5%	5.5%
PSA adjustor (4 Mills)	\$ 3,429.53	\$ 151.95	4.6%	6.2%	\$ 162.72	\$ 5.59	3.6%	0.1%	\$ 157,157	\$ 10,735	7.3%	13.2%
PSA Surcharge Step 1	\$ 3,450.58	\$ 21.05	0.6%	6.9%	\$ 163.50	\$ 0.77	0.5%	0.6%	\$ 158,844	\$ 1,487	0.9%	14.3%
PSA Surcharge Step 2	\$ 3,511.78	\$ 61.20	1.8%	8.8%	\$ 165.75	\$ 2.25	1.4%	2.0%	\$ 162,967	\$ 4,323	2.7%	17.4%
Staff Q2 surcharge as %, 1 Yr Amort	\$ 3,560.55	\$ 48.78	1.4%	10.3%	\$ 168.08	\$ 2.33	1.4%	3.4%	\$ 165,149	\$ 2,182	1.3%	19.0%
Staff Q3 surcharge as %, 1 Yr Amort	\$ 3,768.66	\$ 208.11	5.8%	16.8%	\$ 178.03	\$ 9.95	5.9%	9.5%	\$ 174,460	\$ 9,310	5.6%	25.7%
General Rate Case with reset PSA Adjustor Rate	\$ 4,370.77	\$ 602.11	16.0%	35.4%	\$ 202.65	\$ 24.62	13.8%	24.7%	\$ 206,504	\$ 32,044	18.4%	48.8%
<b>Winter</b>												
Average Monthly Usage (kWh)	35,093				1,186				2,389,861			
Average Monthly kW	108.1				9.2				4,793			
7-03 rates	\$ 2,721.01				\$ 127.16				\$ 126,181			
4-05 rates	\$ 2,789.63	\$ 68.61	2.5%	2.5%	\$ 124.15	\$ (3.01)	-2.4%	-2.4%	\$ 132,995	\$ 6,814	5.4%	5.4%
PSA adjustor (4 Mills)	\$ 2,930.00	\$ 140.37	5.0%	7.7%	\$ 128.89	\$ 4.74	3.8%	1.4%	\$ 142,554	\$ 9,559	7.2%	13.0%
PSA Surcharge Step 1	\$ 2,949.44	\$ 19.44	0.7%	8.4%	\$ 129.55	\$ 0.66	0.5%	1.9%	\$ 143,878	\$ 1,324	0.9%	14.0%
PSA Surcharge Step 2	\$ 3,005.98	\$ 56.53	1.9%	10.5%	\$ 131.46	\$ 1.91	1.5%	3.4%	\$ 147,728	\$ 3,850	2.7%	17.1%
Staff Q2 surcharge as %, 1 Yr Amort	\$ 3,047.45	\$ 41.47	1.4%	12.0%	\$ 133.30	\$ 1.84	1.4%	4.8%	\$ 149,710	\$ 1,982	1.3%	18.6%
Staff Q3 surcharge as %, 1 Yr Amort	\$ 3,224.39	\$ 176.95	5.8%	18.5%	\$ 141.15	\$ 7.85	5.9%	11.0%	\$ 158,168	\$ 8,457	5.6%	25.3%
General Rate Case with reset PSA Adjustor Rate	\$ 3,595.72	\$ 371.33	11.5%	32.1%	\$ 155.68	\$ 14.52	10.3%	22.4%	\$ 186,941	\$ 28,773	18.2%	48.2%

note: Franchise fees excluded from analysis.



**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**General Service**  
**Staff's Emergency/Interim Proposal, %Surcharge, 2 Yr Amort**

	E-32 above 20 kW				E-32 20 kW and Less				E-34			
	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates	Typical Bill	increase	% increase	Cumulative increase over 7-03 rates
<b>Summer</b>												
Average Monthly Usage (kWh)	37,988				1,397				2,683,630			
Average Monthly kW	109.7				10.1				5,133			
7-03 rates	\$ 3,227.90				\$ 162.53				\$ 138,793			
4-05 rates	\$ 3,277.58	\$ 49.68	1.5%	1.5%	\$ 157.13	\$ (5.39)	-3.3%	-3.3%	\$ 146,423	\$ 7,630	5.5%	5.5%
PSA adjustor (4 Mills)	\$ 3,429.53	\$ 151.95	4.6%	6.2%	\$ 162.72	\$ 5.59	3.6%	0.1%	\$ 157,157	\$ 10,735	7.3%	13.2%
PSA Surcharge Step 1	\$ 3,450.58	\$ 21.05	0.6%	6.9%	\$ 163.50	\$ 0.77	0.5%	0.6%	\$ 158,644	\$ 1,487	0.9%	14.3%
PSA Surcharge Step 2	\$ 3,511.78	\$ 61.20	1.8%	8.8%	\$ 165.75	\$ 2.25	1.4%	2.0%	\$ 162,967	\$ 4,323	2.7%	17.4%
Staff Q2 surcharge as %, 2 Yr Amort	\$ 3,534.54	\$ 22.76	0.6%	9.5%	\$ 166.84	\$ 1.09	0.7%	2.7%	\$ 163,986	\$ 1,018	0.6%	18.2%
Staff Q3 surcharge as %, 2 Yr Amort	\$ 3,638.59	\$ 104.06	2.9%	12.7%	\$ 171.81	\$ 4.97	3.0%	5.7%	\$ 168,641	\$ 4,655	2.8%	21.5%
General Rate Case with reset PSA Adjustor Rate	\$ 4,240.70	\$ 602.11	16.5%	31.4%	\$ 196.43	\$ 24.62	14.3%	20.9%	\$ 200,684	\$ 32,044	19.0%	44.6%
<b>Winter</b>												
Average Monthly Usage (kWh)	35,093				1,186				2,389,861			
Average Monthly kW	108.1				9.2				4,793			
7-03 rates	\$ 2,721.01				\$ 127.16				\$ 126,181			
4-05 rates	\$ 2,789.63	\$ 68.61	2.5%	2.5%	\$ 124.15	\$ (3.01)	-2.4%	-2.4%	\$ 132,995	\$ 6,814	5.4%	5.4%
PSA adjustor (4 Mills)	\$ 2,930.00	\$ 140.37	5.0%	7.7%	\$ 128.89	\$ 4.74	3.8%	1.4%	\$ 142,554	\$ 9,559	7.2%	13.0%
PSA Surcharge Step 1	\$ 2,949.44	\$ 19.44	0.7%	8.4%	\$ 129.55	\$ 0.66	0.5%	1.9%	\$ 143,878	\$ 1,324	0.9%	14.0%
PSA Surcharge Step 2	\$ 3,005.98	\$ 56.53	1.9%	10.5%	\$ 131.46	\$ 1.91	1.5%	3.4%	\$ 147,728	\$ 3,850	2.7%	17.1%
Staff Q2 surcharge as %, 2 Yr Amort	\$ 3,025.33	\$ 19.35	0.6%	11.2%	\$ 132.32	\$ 0.86	0.7%	4.1%	\$ 148,653	\$ 925	0.6%	17.8%
Staff Q3 surcharge as %, 2 Yr Amort	\$ 3,113.80	\$ 88.47	2.9%	14.4%	\$ 136.25	\$ 3.93	3.0%	7.1%	\$ 152,882	\$ 4,229	2.8%	21.2%
General Rate Case with reset PSA Adjustor Rate	\$ 3,485.13	\$ 371.33	11.9%	28.1%	\$ 150.77	\$ 14.52	10.7%	18.6%	\$ 181,655	\$ 28,773	18.8%	44.0%

note: Franchise fees excluded from analysis.

**Arizona Public Service**  
**Bill Impact Due to Rate Changes**  
**General Service**  
**AECC Emergency/Interim Proposal with 5.3% interim charge**

	E-32 above 20 kW				E-32 20 kW and Less				E-34			
	Typical	Increase	%	Cumulative	Typical	Increase	%	Cumulative	Typical	Increase	%	Cumulative
	Bill		increase	increase	Bill		increase	increase	Bill		increase	increase
			7-03 rates	over			7-03 rates	over			7-03 rates	over
<b>Summer</b>												
Average Monthly Usage (kWh)	37,988				1,397				2,683,630			
Average Monthly kW	109.7				10.1				5,133			
7-03 rates	\$ 3,227.90	\$ 49.68	1.5%	1.5%	\$ 162.53	\$ (5.39)	-3.3%	-3.3%	\$ 138,793	\$ 7,630	5.5%	5.5%
4-05 rates	\$ 3,277.58	\$ 151.95	4.6%	6.2%	\$ 157.13	\$ 5.59	3.6%	0.1%	\$ 146,423	\$ 10,735	7.3%	13.2%
PSA adjustor (4 Mills)	\$ 3,429.53	\$ 21.05	0.6%	6.9%	\$ 162.72	\$ 0.77	0.5%	0.6%	\$ 157,157	\$ 1,487	0.9%	14.3%
PSA Surcharge - step 1	\$ 3,450.58	\$ 172.34	5.0%	12.2%	\$ 163.50	\$ 8.24	5.0%	5.7%	\$ 158,644	\$ 7,710	4.9%	19.9%
AECC interim Inc.	\$ 3,622.92	\$ 553.30	15.3%	29.4%	\$ 171.73	\$ 20.92	12.2%	18.5%	\$ 166,354	\$ 33,061	19.9%	43.7%
General Rate Case with reset PSA Adjustor Rate	\$ 4,176.22				\$ 192.66				\$ 199,415			
<b>Winter</b>												
Average Monthly Usage (kWh)	35,093				1,186				2,389,861			
Average Monthly kW	108.1				9.2				4,793			
7-03 rates	\$ 2,721.01	\$ 68.61	2.5%	2.5%	\$ 127.16	\$ (3.01)	-2.4%	-2.4%	\$ 126,181	\$ 6,814	5.4%	5.4%
4-05 rates	\$ 2,789.63	\$ 140.37	5.0%	7.7%	\$ 124.15	\$ 4.74	3.8%	1.4%	\$ 132,995	\$ 9,559	7.2%	13.0%
PSA adjustor (4 Mills)	\$ 2,930.00	\$ 19.44	0.7%	8.4%	\$ 128.89	\$ 0.66	0.5%	1.9%	\$ 142,554	\$ 1,324	0.9%	14.0%
PSA Surcharge - step 1	\$ 2,949.44	\$ 146.53	5.0%	13.8%	\$ 129.55	\$ 6.50	5.0%	7.0%	\$ 143,878	\$ 7,004	4.9%	19.6%
AECC interim Inc.	\$ 3,095.97	\$ 338.92	10.9%	26.2%	\$ 136.05	\$ 11.88	8.7%	16.3%	\$ 150,882	\$ 29,541	19.6%	43.0%
General Rate Case with reset PSA Adjustor Rate	\$ 3,434.89				\$ 147.93				\$ 180,423			

note: Franchise fees excluded from analysis.

**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Assumptions used for Summary Bill Impacts**

**All Scenarios include:**

7-03 rates - Franchise Fees are built into 7-03 rates. Franchise Fees are included in calculations unless otherwise noted.

4-05 rates - Includes CRCC and EPS charges and Franchise Fees unless otherwise noted.

PSA adjustor - \$.004/kWh charge starting in Feb. 06.

**Scenario 1. As Filed Emergency/Interim Request**

PSA surcharge - step 1 - \$.000554/kWh charge starting in May 06, ending Apr. 07.

Emergency/Interim rate case - \$.011161/kWh Interim charge starting Apr. 06, ending Dec. 06 assuming the proposed rates from current rate case take effect Jan. 07.

PSA surcharge - step 2 - \$.001611/kWh charge starting in Jul. 06, ending Jun. 07.

General Rate Case with reset PSA Adjustor Rate - Current rate case proposed rates including CRCC, EPS, \$.001505/kWh PSA adjustor rate after Feb. 07 reset, \$.000554/kWh Step 1 Surcharge and \$.001611/kWh Step 2 Surcharge remain in effect.

**Scenario 2. Revised Emergency/Interim Request**

PSA surcharge - step 1 - \$.000554/kWh charge starting in May 06, ending Apr. 07.

Emergency/Interim rate case - \$.008676/kWh Interim charge starting Apr. 06, ending Dec. 06 assuming the proposed rates from current rate case take effect Jan. 07.

PSA surcharge - step 2 - \$.001611/kWh charge starting in Jul. 06, ending Jun. 07.

General Rate Case with reset PSA Adjustor Rate - Current rate case proposed rates including CRCC, EPS, \$.001505/kWh PSA adjustor rate after Feb. 07 reset, \$.000554/kWh Step 1 Surcharge and \$.001611/kWh Step 2 Surcharge remain in effect. Franchise Fees at 1.44% are included unless otherwise noted.

**Scenario 3. Staff's Emer./Interim Proposal, 1 Yr Amort, ¢/kWh Chg.**

PSA surcharge - step 1 - \$.000554/kWh charge starting in May 06, ending Apr. 07.

PSA surcharge - step 2 - \$.001611/kWh charge starting in Jul. 06, ending Jun. 07.

STAFF Q2 Surcharge - \$.001201/kWh charge starting in Sep. 06, ending Aug. 07.

STAFF Q3 Surcharge - \$.005159/kWh charge starting in Dec. 06, ending Nov. 07.

General Rate Case with reset PSA Adjustor Rate - Current rate case proposed rates including CRCC, EPS, \$.000748/kWh PSA adjustor rate after Feb. 07 reset, all 4 surcharges remain in effect. Franchise Fees at 1.44% are included unless otherwise noted.

**Scenario 4. Staff's Emer./Interim Proposal, 2 Yr Amort, ¢/kWh Chg.**

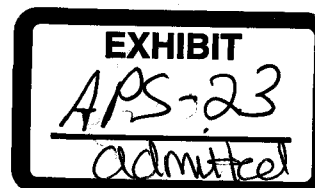
PSA surcharge - step 1 - \$.000554/kWh charge starting in May 06, ending Apr. 07.

PSA surcharge - step 2 - \$.001611/kWh charge starting in Jul. 06, ending Jun. 07.

STAFF Q2 Surcharge - \$.000589/kWh charge starting in Sep. 06, ending Aug. 08.

STAFF Q3 Surcharge - \$.002527/kWh charge starting in Dec. 06, ending Nov. 08.

General Rate Case with reset PSA Adjustor Rate - Current rate case proposed rates including CRCC, EPS, \$.000748/kWh PSA adjustor rate after Feb. 07 reset, all 4 surcharges remain in effect. Franchise Fees at 1.44% are included unless otherwise noted.



**ARIZONA PUBLIC SERVICE COMPANY**  
**Summary of Bill Impacts**  
**Assumptions used for Summary Bill Impacts**

**Scenario 5. Staff's Emer./Interim Proposal, % Surc. 1 Yr Amort.**

PSA surcharge - step 1 - \$.000554/kWh charge starting in May 06, ending Apr. 07.

PSA surcharge - step 2 - \$.001611/kWh charge starting in Jul. 06, ending Jun. 07.

STAFF Q2 Surcharge - 1.5% charge starting in Sep. 06, ending Aug. 07. The percentage is applied to base rate bill total that includes the BSC and the base rate demand and energy charges. The CRCC, EPS, PSA adjustor and surcharges are excluded.

STAFF Q3 Surcharge - 6.4% charge starting in Dec. 06, ending Nov. 07. The percentage is applied on the same basis as the Staff Q2 surcharge.

General Rate Case with reset PSA Adjustor Rate - Current rate case proposed rates including CRCC, EPS, \$.000748/kWh PSA adjustor rate after Feb. 07 reset, all 4 surcharges remain in effect. Franchise Fees at 1.44% are included unless otherwise noted.

**Scenario 6. Staff's Emer./Interim Proposal, % Surc. 2 Yr. Amort.**

PSA surcharge - step 1 - \$.000554/kWh charge starting in May 06, ending Apr. 07.

PSA surcharge - step 2 - \$.001611/kWh charge starting in Jul. 06, ending Jun. 07.

STAFF Q2 Surcharge - 0.7% charge starting in Sep. 06, ending Aug. 08. The percentage is applied to base rate bill total that includes the BSC and the base rate demand and energy charges. The CRCC, EPS, PSA adjustor and surcharges are excluded.

STAFF Q3 Surcharge - 3.2% charge starting in Dec. 06, ending Nov. 08. The percentage is applied on the same basis as the Staff Q2 surcharge.

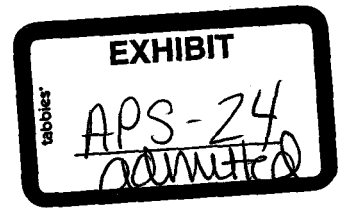
General Rate Case with reset PSA Adjustor Rate - Current rate case proposed rates including CRCC, EPS, \$.000748/kWh PSA adjustor rate after Feb. 07 reset, all 4 surcharges remain in effect. Franchise Fees at 1.44% are included unless otherwise noted.

**Scenario 7. AECC Emergency/Interim Proposal**

PSA surcharge - step 1 - \$.000554/kWh charge starting in May 06, ending Apr. 07.

AECC Interim Inc. - 5.3% Interim charge starting May 06, ending Dec. 06 assuming the proposed rates from the current rate case take effect Jan. 07. The percentage is applied to the base rate bill total which includes the BSC and the base rate demand and energy charges. The CRCC, EPS, PSA adjustor and surcharges are excluded.

General Rate Case with reset PSA Adjustor Rate - Current rate case proposed rates including CRCC, EPS, \$.004/kWh PSA adjustor rate after Feb. 07 reset, the surcharge remains in effect. Franchise Fees at 1.44% are included unless otherwise noted.



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**REBUTTAL TESTIMONY OF DONALD G. ROBINSON**

**On Behalf of Arizona Public Service Company**

**Docket No. E-01345A-06-0009**

**March 13, 2006**

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1                   **REBUTTAL TESTIMONY OF DONALD G. ROBINSON**  
2                   **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**  
3                   **(Docket No. E-01345A-06-0009)**

4    I.    INTRODUCTION

5    Q.    **PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

6    A.    My name is Donald G. Robinson. I am Vice President of Planning for Arizona  
7           Public Service Company ("APS" or "Company"). I have responsibility for  
8           Corporate Planning, Resource Acquisition, Resource Planning, Budgets,  
9           Forecasts, Energy Risk Management and New Business Ventures. My business  
10          address is 400 North Fifth Street, Phoenix, Arizona 85004.

11   Q.    **WHAT ARE YOUR RESPONSIBILITIES WITH THE COMPANY AS**  
12          **WELL AS YOUR EDUCATIONAL AND PROFESSIONAL**  
13          **BACKGROUND?**

14   A.    I am Vice President of Planning for Arizona Public Service Company  
15          ("Company"). I am responsible for the Company's corporate planning, resource  
16          acquisition, resource planning, budgets, forecasts, energy risk management and  
17          new business ventures. I was previously Vice President of Finance and Planning  
18          for Arizona Public Service Company. In this position, I was responsible for the  
19          Company's financial planning, corporate planning, budgeting, forecasting,  
20          accounting, risk management, tax services and supply chain management.  
21          Before the position above, I was Vice President of Regulation and Planning for  
22          Arizona Public Service Company. In this position, I was responsible for the  
23          Company's regulatory policies and activities before the Arizona Corporation  
24          Commission and the Federal Energy Regulatory Commission, as well as  
25          corporate planning. Prior to the promotion above, I was Director of Accounting,  
26          Regulation and Planning for Arizona Public Service Company. I had

1 responsibility for the Company's accounting, planning and regulatory policies  
2 and activities. I joined the Company in 1978 and held a number of supervisory  
3 positions in the accounting department. In 1981, I was named Manager of  
4 Regulatory Affairs and in 1998, Manager of Rates and Regulation. I was a  
5 principal in the consulting firm Micon from 1992-1996. I have a Bachelor of  
6 Science degree in Accounting.

7 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

8 A. I will comment on Staff's proposed modifications to the power supply  
9 adjustment ("PSA") mechanism's surcharge procedures and why they are  
10 appropriate for a well-functioning PSA.

11  
12 **II. SUMMARY**

13 **Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?**

14 A. Yes. Staff's suggestion of quarterly PSA surcharges based on the current year's  
15 under-collection of fuel and purchased power costs is consistent with the  
16 original intent of the PSA as agreed to by APS and over 20 other parties to the  
17 2004 APS Settlement. It allows the PSA to better track changes in fuel costs,  
18 which in turn improves the Company's operational cash flow and resulting  
19 financial metrics, better assigns costs to those customers responsible for their  
20 incurrence, and sends more-timely price signals to customers as to the cost of  
21 electricity. It would also make the PSA more analogous to the adjustor  
22 mechanisms in use by other utilities in Arizona and around the country. This,  
23 along with some of the provisions suggested by Mr. Wheeler to ensure that cost  
24 recovery would be as timely and certain as is practicable, likely would be  
25 viewed as helpful improvements by the capital markets.



1     III.   THE STAFF PROPOSAL IS CONSISTENT WITH THE 2004 APS  
2           SETTLEMENT

3     Q.    **WHY DO YOU SAY THAT THE STAFF PROPOSAL IS CONSISTENT**  
4           **WITH THE 2004 APS SETTLEMENT?**

5     A.    In the Company's recent PSA surcharge proceeding, all parties to the 2004  
6           settlement supported the Company's ability to seek PSA surcharges based on the  
7           balance in what Decision No. 68437 (February 2, 2006) eventually denominated  
8           as the "PSA Tracking Account." The PSA surcharge mechanism always was  
9           intended to be a "safety-valve" to prevent large accumulations of deferrals  
10          during the year and to partially compensate for the fact that the PSA adjustor  
11          rate could only be changed annually rather than monthly as is done in the case of  
12          other adjustors. The PSA surcharge mechanism is even more important in this  
13          respect given the cumulative 4-mill cap imposed on the annual PSA adjustor  
14          rate.

15     IV.   THE STAFF PROPOSAL ALLOWS FOR MORE TIMELY RECOVERY OF  
16           COSTS, IMPROVES THE MATCHING OF COST INCURRENCE WITH  
17           COST RESPONSIBILITY, AND IMPROVES PRICE SIGNALS TO  
18           CUSTOMERS

19     Q.    **ARE THERE OTHER ADVANTAGES TO THE STAFF PROPOSAL?**

20     A.    Yes. I will allow others to comment on whether the Staff proposal, as modified  
21           by Mr. Wheeler's suggestions, would stave off a further down rating of APS.  
22           Aside from that issue, the proposal would improve the timely recovery of costs  
23           if permitted to function with certainty. That, in turn, would better match the  
24           incurrence of costs on behalf of customers with the responsibility for paying for  
25           such costs. Likewise, the more current the recovery of costs, the better signal we  
26           are sending customers concerning the cost of their decisions to use energy and  
            the value of their decisions to conserve energy.

1 **Q. DOES STAFF'S PROPOSAL BRING THE PSA INTO LINE WITH HOW**  
2 **MOST ADJUSTMENT MECHANISMS WORK IN ARIZONA AND**  
3 **AROUND THE COUNTRY?**

4 A. Yes. Most adjustment mechanisms allow more periodic adjustments, sometimes  
5 monthly, or periodic surcharges (usually with some triggering event), or both.  
6 This Staff proposal further includes the suggestion that additional changes to the  
7 PSA be considered in the general rate case. I agree and have in fact made several  
8 such suggested changes in that proceeding.

9 **V. CONCLUSION**

10 **Q. DO YOU HAVE ANY CONCLUDING REMARKS?**

11 A. Yes. Staff's proposal for quarterly PSA surcharges based on the current year's  
12 under-collection of fuel costs has considerable merit independent of whether the  
13 Commission finds APS has an "emergency." It will improve the PSA's function  
14 as a means for the timely and certain recovery of legitimate fuel costs. It further  
15 promotes the PSA's role in matching costs with cost recovery and in sending  
16 price signals to APS customers.

17 **Q. DOES THIS CONCLUDE YOUR PREFILED REBUTTAL TESTIMONY**  
18 **IN THIS PROCEEDING?**

19 A. Yes.  
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ARIZONA PUBLIC SERVICE COMPANY

Comparison of Fuel Costs to Estimated Embedded Fuel Costs

Calendar Year	Total System Average Fuel Costs (\$/kwh)	Authorized Return on Equity	Adjusted Return on Equity	Annual Over(Under) Collection (\$ millions)
(a)	(b)	(c)	(d)	(e)
1992	0.011970	12.00%	11.20%	(\$10.8)
1993	0.012989	12.00%	10.90%	(\$16.6)
1994	0.013420	12.00%	12.60%	\$19.9
1995	0.011944	12.00%	12.60%	\$21.7
1996	0.013325	11.25%	12.40%	\$19.7
1997	0.012286	11.25%	12.50%	\$21.0
1998	0.012142	11.25%	12.10%	\$15.3
1999	0.012637	11.25%	11.60%	\$7.4
2000	0.017308	11.25%	12.40%	\$22.3
2001	0.018518	11.25%	8.00%	(\$68.4)
2002	0.017308	11.25%	7.90%	(\$71.8)
2003	0.022088	11.25%	7.10%	(\$89.0)
2004	0.022492	11.25%	8.30%	(\$66.8)

